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1990 Utah Agricultural Statistics

Utah Department Of Agriculture Annual Report

Enterprise Budgets

NORMAN H. BANGERTER
GOVERNOR

STATE OF UTAH
OFFICE OF THE GOVERNOR
SALT LAKE CITY
84114

Dear Fellow Utahn:

This publication in your hands -- the 1990 report of Utah's agriculture -- is your key to understanding the progress of one of our state's most important and productive industries. I'm pleased to have a part in helping to encourage this important industry and in bringing you this report, because I'm proud of our farmers and ranchers here in Utah. They're doing a fine job.

You'll see, as you study the book, that it contains three parts: a report of the Utah Department of Agriculture's activities for the past year, a compilation of Utah's agricultural statistics, and a section containing enterprise budgets that will help our farmers and ranchers compare their operating costs and revenues with similar operations around the state. This will lead to important improvements.

A new addition to the enterprise budget section is a set of suggested management strategies that might boost the profitability of an enterprise. And even a small increase in the percentage of profit can lead to debt reduction and improved family living. Speaking of debt reduction, it's reassuring to me to hear that farm credit is doing better than in recent years. We all hope we've reached the end of the rocky financial road that many ranchers and farmers have been on in the '80s.

It seems as though there's good news AND bad news every year in the agricultural industry. The fourth consecutive year of drought in some parts of the state is surely bad news, along with this spring's weather damage to the Utah fruit crop. But our state government, especially the Utah Department of Agriculture, is doing everything possible to ease the impact of this bad weather on our farmers and ranchers. We're seeing new range grasses developed at Utah State University that have more resistance to drought, disease and insects. Increased water storage in the near future should help even out the supply of irrigation water from year to year. And conservation tillage research will help stretch our water supply.

One new project in 1989-90 that holds a lot of promise for increased agribusiness revenue in Utah is the value-added program. Designed to keep income in Utah that has been going to other states in the past, it is helping farm producers and processors perform the added processes that make farm and ranch products worth more in the marketplace. You'll be hearing more about this in coming years.

I'm sure all Utahs join me in congratulating our state's farmers and ranchers for their productivity and perseverence against tough obstacles to put food on our table. We should think about them with gratitude at least three times a day.

Sincerely,

Norman H. Bangerter
Governor

Introduction

The 1987 Census of Agriculture data was published in 1989. Following the census publication, each state office of the National Agricultural Statistics Service reviews its estimates in relation to the level of the census published data. During the review, our estimates since the 1982 census are subject to revision, if necessary. In Utah we made a few generally minor revisions for the 1983-87 period.

This publication always carries the current data for all previous years. Therefore, you may wish to use this current issue for previous years' data. Contact our office if you need additional historic information.

The 1990 publication is our 20th annual edition. It continues to be a cooperative effort between the Utah Agricultural Statistics Service and the Utah Department of Agriculture. The publication is divided into two parts, the Utah Department of Agriculture Annual Report and the Agriculture Statistics.

A big "thank you" to those farmers, ranchers and agricultural businesses that have voluntarily reported to us making this publication possible. Their support is certainly appreciated.

The support staff of the office are often overlooked. A special thanks goes to David Johnson, Bette Riley, and Linda Spicknall for their help in making sure that statistics data in the publication are correct.

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This report has been compiled and published as a cooperative effort and function of the following agencies of Federal and State Government.

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We would like to thank Ron Daines, USU Extension Service; Holly Hyer, Kurt Gutknecht, and Gary Neuenswander, USU Experiment Station; and Max Wallintine, Director, Agriculture Station, B.Y.U., for helping to provide the photographs and county data graphics used in this publication.

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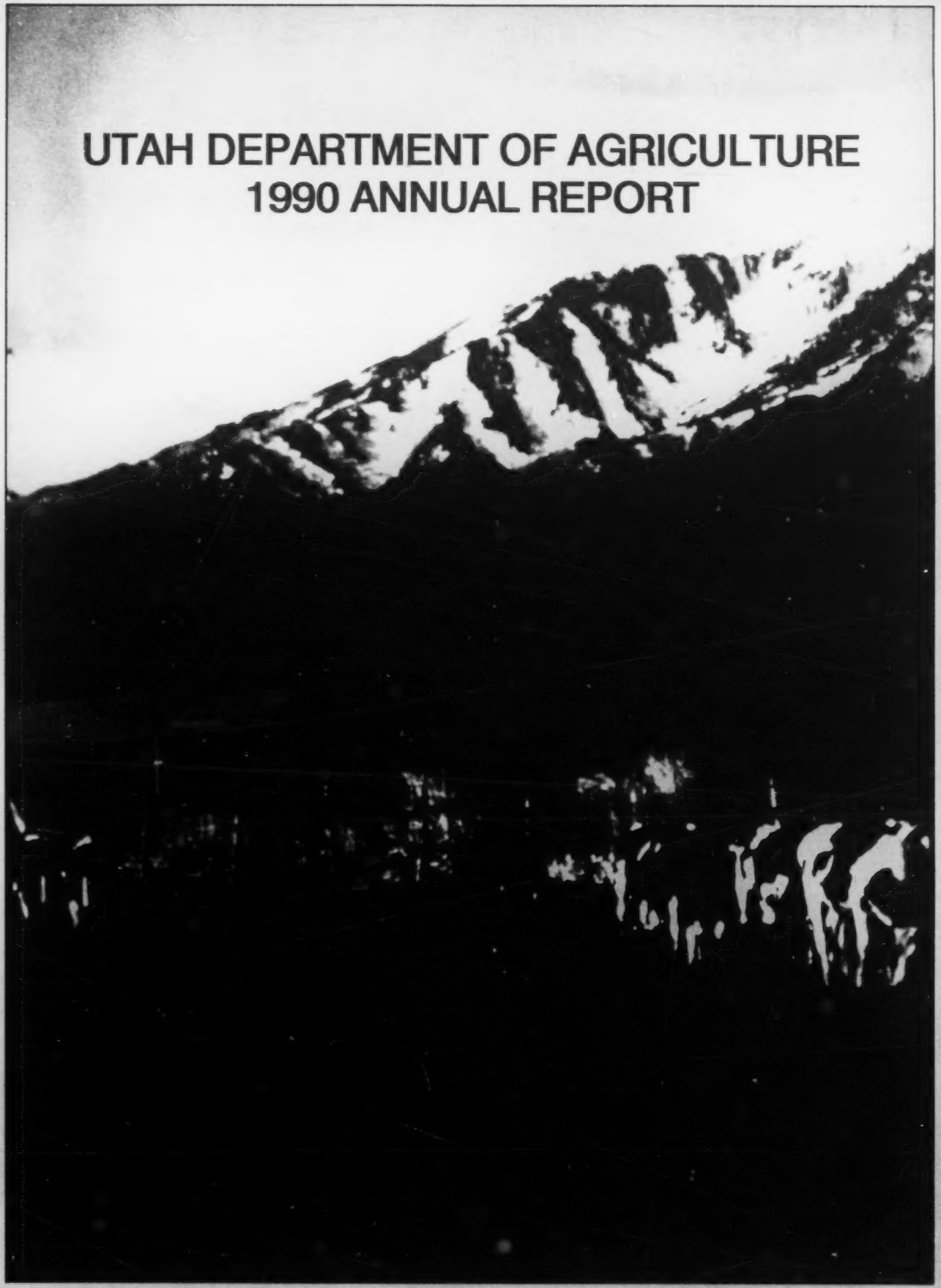
UTAH DEPARTMENT OF AGRICULTURE
1990 ANNUAL REPORT



Utah Department of Agriculture

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Director of Marketing & Promotion

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Information Officer

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6-15-90

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Administrative Services	
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Budget and Accounting	538-7111
Data Processing Services	538-7113
Personnel	538-7112
Agricultural Development & Conservation	
Director	538-7170
Ag Resource Development Loans	538-7176
Environmental Quality	538-7172
Soil Conservation	538-7171
Agricultural Statistics (USDA)	524-5003
Animal Industry	
Director	538-7160
Animal Health	538-7162
Serology Laboratory	538-7165
Animal Identification (Brands)	538-7166
Meat Inspection	538-7117
Chemistry Laboratory	
Director	538-7128
Pesticide Residue Laboratory	538-7135
Bacteriology Laboratory	538-7129
Feed & Fertilizer Laboratory	538-7134
Meat Laboratory	538-7132
Food & Dairy	
Supervisor	538-7150
Bedding, Quilted Clothing, Upholstered Furniture	538-7151
Egg & Poultry	538-7148
Investigation	538-7141
Marketing & Promotion	
Director	538-7108
Livestock & Market News	538-7109
Plant Industry	
Director	538-7180
Entomology	538-7184
Fresh Fruit & Vegetable Inspection	538-7183
Insect Infestation Emergency Control	538-7180
Grain, Seed & Feed Inspection	538-7187
Grain Grading Lab (Ogden UT)	392-0603
Pesticides/Fertilizers	538-7188
Seed Laboratory	538-7182
Noxious Weeds	538-7183
Weights & Measures	538-7158

State of Utah
DEPARTMENT OF AGRICULTURE
GOVERNOR'S CABINET

Norman H. Bangerter
Governor
Miles 'Cap' Ferry
Commissioner

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(801) 538-7100

Dear Friends of Utah Agriculture:

This past year has brought some important developments in Utah agriculture. Despite being in our fourth year of drought, we're seeing strong prices for cattle, milk and hay, Utah's biggest livestock and crop enterprises. Many farmers and ranchers have pulled back from the financial brink and have improved their position by reducing their debt load. Net farm income and land values have also strengthened.

Utah is making great strides in agricultural research. Construction on a new biotechnology research facility at Utah State University is complete, and equipping the laboratories is under way. Planning has started on a new animal diagnostic laboratory near USU which will add strength to the livestock industry in our state. Both those projects had financial and leadership help from our department. A number of other important research projects are under way with joint financing from the Utah Department of Agriculture and Utah State University; agribusiness is a partner in many of these projects, as well.

Many Utahns think of our department as an enforcer of state regulations, and that's an important part of the job we do. It's essential to the well-being of legitimate agricultural producers, processers, and marketers that we protect their markets from careless or unsafe products and services. Proper use of chemicals and fertilizers on the farm; clean milk production as well as processing facilities; sanitary handling of meat, poultry and eggs; correct labelling of food packages in the stores; accurate scales and measuring devices in all retail outlets; honest weight and measure in every product sold to Utah consumers -- these and many, many more aspects of business practice are under our scrutiny.

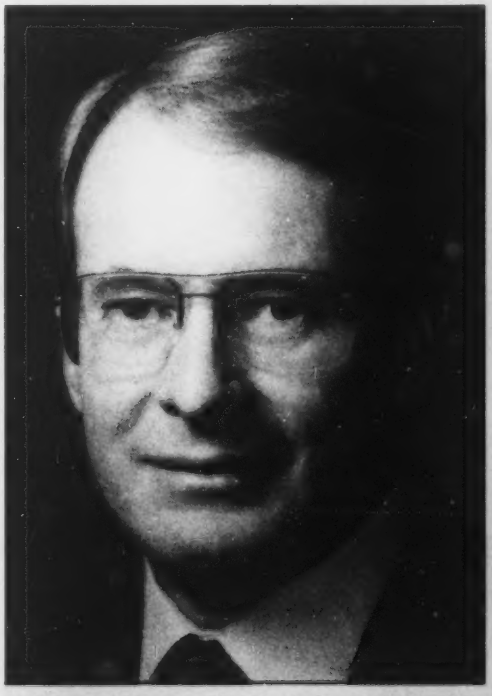
Regulation isn't our only service to the citizens of Utah, though. We work in a wide variety of other areas. Take water quality, for instance. We're working with the Environmental Protection Agency (EPA) on a study of Utah groundwater to discover what pollution sources are affecting it. (Early indications are that agriculture is doing almost no polluting of well water.) We have three scientists on loan from other agencies working in the department to measure salinity in the Colorado River and to take steps to reduce it.

Marketing and promotion of Utah products and services is another area of department activity. Not only do we have such programs as a beef marketing contract with a marketing organization for exports to Japan and around the world; we operate the "Utah Works" program to raise Utahns' awareness of all types of Utah products and services, and to encourage them to buy those items when they have an equal choice. We're emphasizing value-added processing such as Norbest's new turkey products that create new jobs in Utah rather than letting the work be done out-of-state.

This report itself is another service. Lending sources, advertising agencies, marketing specialists and others make constant use of the figures contained in it to target special messages and services to our citizens. I hope you'll find helpful information in it, as well. And I hope you'll gain a greater appreciation for the tremendous service that farmers and ranchers in Utah and across the nation perform, feeding all Americans and many people overseas with only about two percent of our work force. It allows the rest of us many choices concerning our lifestyle as well as our food.

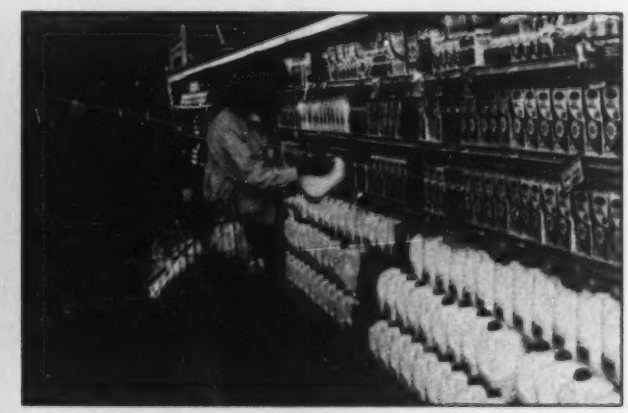
Sincerely,

Miles "Cap" Ferry, Commissioner
Utah Department of Agriculture



Utah Department of Agriculture: Mission Statement

Test plots in a Utah State University research project help develop new range grasses and stimulate Utah's economy.



Accurate labeling, full weight or measure, and wholesome food products are assurances UDA offers Utah consumers.

Utah's fruit growers also cooperate in the campaign to protect consumers from poor products and careless processing.

This department has a three-fold mission: To conserve and develop Utah's agricultural resources; to improve Utah's agriculture and allied industries financially; and to protect consumers, producers and processors be regulating the agricultural code of the state.

Primary goals in each of the three parts of that mission are the following:

1. Conservation and Development

To protect, conserve and develop Utah's agricultural and natural resources, including water and land, among others.

2. Marketing and Promotion

To strengthen Utah's agriculture and allied industries financially by expanding present markets and developing new ones for Utah's agricultural products, locally and in the United States as well as overseas; to help develop new products and production methods; and to promote in-state processing of Utah agricultural products for a stronger state economy.

3. Regulation

To protect public health and safety as well as agricultural markets by assuring consumers of clean, safe, wholesome, and properly labeled and measured or weighed products. This includes products inspected by UDA's animal industry, plant industry, weights and measures, and food and dairy inspectors, plus other consumer products such as bedding, quilted clothing and upholstered furniture.

This inspection also protects legitimate producers and processors by keeping their markets safe from poor products and careless processing.

Commissioner's Office

1989-90 Goals and Progress

- **Open other states' borders to Utah fruits** -- Through phyto-sanitary inspection, insect and disease control, and other measures, Utah agricultural officials are increasing our sales of fruit to other Western states.
- **Storage facility for chemicals** -- Storage of new test chemicals and of completed samples and other waste is a high priority at UDA; planning headway is being made on a new chemical storage building.
- **Water-quality testing and improvement** -- On-going tests for groundwater contamination, a salinity control project for the Colorado River, and other measures are upgrading the quality of Utah's water supply.
- **Increased support for soil and water conservation districts** -- One additional resource conservation and development (RC&D) district was put into the federal program during the report year, and planning is under way for others to gain federal support.
- **Police officer training for brand inspectors** -- All full-time brand inspectors and the state veterinarian are now police-academy-certified.
- **Support for a livestock diagnostic laboratory at USU** -- Department employees helped gain approval for this important facility in legislature, and design plans are under way.
- **Value-added project for agricultural products** -- Eleven projects were partially financed by joint funds from UDA and the Department of Community and Economic Development to help reduce production costs and increase Utah's agricultural revenue.
- **Enhanced export sales of Utah farm products** -- A contract was signed during the report year to promote Utah beef in Japan and other nations; export seminars also increased exporters' know-how.
- **Increased testing of motor fuels for correct octane rating** -- The Division of Weights and Measure stepped up its testing in this area of high consumer interest to encourage correct labelling of fuel pumps.
- **Greater emphasis on food safety and proper labelling** -- Public concern over the purity of their food supply led to careful checking of retail outlets as well as processing plants for cleanliness in processing and accuracy in labelling.
- **Employee training on substance abuse and sexual harassment** -- Continued emphasis on employee training programs covered these areas of responsibility in the workplace. Videotapes on the two subjects were shown to all employees.
- **Defense of the public lands multiple-use concept** -- The commissioner and deputy commissioner not only sat in on numerous public lands meetings where grazing and other aspects of multiple use were discussed, but they also took action to maintain this practice of such great importance to the Utah livestock industry.
- **Farm debt mediation** -- As financial problems continued to beset some of Utah's farmers, UDA administered the farm debt mediation program to help work out arrangements between lenders and borrowers to keep farms in operation.
- **Section 8 (range management) hearing process** -- This federal program to establish mediation between public land managers (BLM and the Forest Service) and grazing permit holders is helping smooth the way for livestockmen fighting to preserve this production tool.
- **Gypsy moth, grasshopper and Mormon cricket control** -- Serious infestations of these three pests and others led to a concerted effort by the department during the report year to control or eradicate such insects.

The Year's Highlights

LEGISLATURE

The department received good treatment at the hands of the 1990 state legislature as that body approved all legislation proposed by the department, as well as a number of other bills affecting agriculture. Following is a summary of all bills passed by legislature in which UDA has an interest:

HB57 - Grants 2,000 pound-per-axle overweight allowance for livestock and grain trucks on non-interstate highways in Utah.

HB61 - Creates a legislative task force to study the BLM wilderness proposal and to establish a legislative recommendation to Congress.

HB92 - Transfers administration of ports of entry from Department of Public Safety to Department of Transportation. (Will have an effect on Utah's animal identification program.)

HB95 - Prohibits coyotes and raccoons from being kept as pets in Utah.

HB130 - Exempts agricultural landowners from rollback taxes on greenbelt lands taken by eminent domain, under threat of eminent domain, or used as gifts to government entities. Imposes an in-lieu fee equal to the rollback tax on the condemning agency to go to local taxing entities.

HB140 - This housekeeping bill makes technical changes in the agricultural code, such as allowing UDA to subpoena records as well as individuals in administrative law cases.

HB153 - Appropriates $50,000 from wildlife funds to pay for livestock losses to cougar and bear. (Payments are restricted to 50 percent of the value of lost animals to spread limited funds more evenly among claimants.) Claimants must be current in payment of the head tax on livestock.

HB383 - Deletes restrictions to whom state lands can be sold and makes noxious weed assessments non-lapsing.

HB396 - Makes it a class A misdemeanor to release commercially held fur-bearing animals without permission.

HCR2 - Re-establishes the multiple use-sustained yield principles in the administering of federal- and state-owned lands in Utah.

HCR6 - Requests the U.S. Fish and Wildlife Service to provide funding for compensation to landowners for crop damage caused by migratory water fowl.

HJR28 - Authorizes a study of the need to create a department of environmental quality to replace the division of environmental quality.

SB23 - Appropriates $1.5 million for studies for the development of the Bear River.

SB26 - Revises the underground storage tank law by establishing an indemnity fund through the imposition of an environmental surcharge on all fuel stored in underground tanks.

SB28 - Increases the minimum bond requirement for agricultural product dealers and defining dealers better.

SB113 - Appropriates $20 million from the general fund to rebuild the Quail Creek Dike.

SB246 - Makes Utah's meat and poultry inspection program equal to that of the USDA so as to avoid federal sanctions.

UDA officials will also keep a close watch on SB197, which establishes the authority to organize a Youth Conservation Corps in the state. YCC has value both as a source of jobs for youth and as a rural experience for city youth.

RESEARCH SUPPORT

The department supported the following research projects, mostly at Utah State University, with its $150,000 budget for research:

Alfalfa grading -- There are several methods to analyze hay quality using laboratory equipment. This research project will help develop a technique to assess hay quality using sight techniques. The study will compare the results of laboratory analysis with on-site inspection.

Backgrounding cattle -- Instead of sending weaned calves out-of-state for further weight gain, this study is looking for the best ways to keep them in Utah by using resources within the state for higher profits.

Biotechnology Center -- Several innovative projects are being conducted under this program. Biotechnology is the leading edge of agriculture with research on hybrid plants, vaccines, animal growth and production enhancement, and food processing technology.

Commodity budgets -- Economists at USU develop cost-and-return budgets for various farm and ranch enterprises every year. These budgets, contained at the end of this report, help producers boost profits and estimate their gain from possible new ventures.

Cull cow packing feasibility -- Older cows culled from Utah beef and dairy herds have, for years, been sent outside the state for processing into ground beef and other products, then shipped back to Utah for retail sale. This study is seeking to develop packing facilities for cull cows here, to save transportation costs and make jobs in Utah.

Embryo transplant -- This research is aimed at eradicating the liivestock disease of scrapie by developing scrapie-free embryos which, retransplanted into carrier ewes, will result in disease-free lambs. Utah may also develop the embryos as a product for export.

Farm safety -- Little data exists concerning farm accidents in Utah. This project will collect and analyze information about such accidents.

Groundwater monitoring -- Because of public concern over the risk to groundwater from agricultural chemicals, this project will analyze high-risk areas for contamination and develop methods of sample analysis. Little date on this was available before the research project started.

Laboratory upgrade -- To perform the analyses required in groundwater monitoring research, a new machine (the GC/MS) was bought to analyze pesticide samples.

Pork feed feasability -- This project is analyzing the potential to use waste products from local food processors, grocery stores, restaurants and other sources for feeding hogs. This could reduce feed costs and waste disposal problems.

Potato plots -- Potato acreages in Utah have declined in recent years. These variety studies are seeking to make the enterprise more profitable for Utah growers.

Riparian zone management -- With growing public concern over proper management of sensitive stream zones, this research seeks to develop good management

Shrub development plots -- Aimed at improving rangeland carrying capacity, this project seeks to spread the production of already-developed shrub varieties by gaining more knowledge about how to grow, cultivate and harvest them. Seed will then be marketed regionally.

ANIMAL DAMAGE CONTROL

Reported predator losses to Utah sheep, cattle and poultry producers in 1989 totaled nearly $2 million, with coyote attacks on lambs making up more than 40 percent of that total. Coyote attacks on mature sheep added another 23 percent. All told, Utah sheepmen lost more than $1.14 million in animals to various predatory animals and birds.

A wide variety of predators feed on Utah lambs, including coyote, bobcat, red fox, dogs, mountain lions, black bears, golden and bald eagles, ravens and badgers.

Obviously, only the larger animals prey on cattle. Losses of adult cattle were only reported (or confirmed) to coyotes and black bears, with mountain lions also accounting for some calves. Coyotes, dogs and foxes killed some $10,700 worth of turkeys.

More than $1.5 million was spent by the state in protecting Utah livestock, crops, human health, property and wildlife, with livestock protection taking most of it. Three fixed-wing aircraft owned by the Animal Damage Control unit of the Utah Department of Agriculture were the base for much of the control work, with rented helicopters used for some aerial gunnery.

AG IN THE CLASSROOM

Work in this program, chaired by the department information officer, has centered on publishing a teachers' handbook entitled "Utah Agriculture and Me" for the past two years. A foundation is also being organized to raise funds from public and private sources and to operate educational programs to teach children about agriculture.

Administrative Services

This division focuses on support and training for the rest of the Utah Department of Agriculture. Training emphases for the report year included avoiding sexual harassment, substance abuse prevention, and health awareness to increase the health of employees and their families while reducing health care costs.

In support services, these are the main areas of activity for the division:

- **BUDGET:** Administrative Services prepares the annual budget for the department, basing it on estimates from the various divisions. It also provides accounting and computer services so each division director will receive a monthly report on each function of the division. Administrative Services tracks twenty different programs for revenue and expenses.

- **PERSONNEL AND PAYROLL:** This function includes keeping payroll and leave records on about 160 full-time and about 50 part-time employees. The division maintains personnel and payroll records, helps with screening and interviewing job-seekers and hiring new employees, keeps tax records, etc. The division also publishes up-dated versions of policies and procedures manuals.

- **PURCHASING AND OTHER FINANCE AND ACCOUNTING FUNCTIONS:** A number of activities fall under this heading; handling the purchase of a variety of items -- from large equipment down through office supplies, making bank deposits, and keeping all travel expense records are a few. The division also makes sure UDA employees follow proper bidding and purchasing procedures and works with the Utah Department of Adminstrative Services and the Department of Human Resources on the above functions.

- **DATA PROCESSING:** The staff in a special section of Administrative Services handles maintenance and upgrading of computer equipment for all divisions in the Utah Department of Agriculture. They also write programs for such special applications as brand recording (with drawings of brands), making back-up tapes of computer files several times a week, supervising computer training and purchasing schedules for all department employees, etc.

- **LICENSING:** This activity involves preparing about 10,000 renewal licenses for bedding and upholstery manufacturers, nurserymen, beekeepers, buyers of agricultural products, livestock markets, milk haulers, food processing plants, and others.

- **CONTRACTS AND ADMINISTRATIVE RULE-MAKING:** Division employees prepare contracts for outside services, such as advertising agencies, marketing organizations and others. If changes are needed in department rules, the division ensures that the proper practices are followed in filing them on time.

- **MISCELLANEOUS SERVICES:** These include managing the department motor pool, operating the mail room, maintaining equipment inventory records, overseeing telephone services, purchasing and storing office supplies and other stock items, buying and supervising audio-visual aids equipment, handling risk management (self-insurance) records, doing leave accounting, providing petty cash, applying for and securing grants, and many other duties.

Public Information

Dividing his time between internal and external communications, the department's information officer focused on these issues and situations during the report year:

- Several consecutive years of drought, with its heavy impact on Utah agriculture;
- The battle to control gypsy moths, grasshoppers and Mormon crickets;
- The continued attack on production agriculture by special interest groups such as animal rightists and opponents of the multiple-use concept for managing public land;
- On the positive side, increased marketing efforts and successes by the Utah Department of Agriculture;
- The value-added emphasis that is bringing increased agricultural processing revenue to Utah.

The information officer's activities during the report year included sending frequent news releases to the mass media and working with newspaper, radio and television reporters. He wrote speeches for the commissioner of agriculture and agricultural speeches for the governor and lieutenant governor, plus writing a number of letters for the commissioner and governor replying to queries about farm practices such as treatment of farm animals.

During the year, he wrote or edited several publications, including the department's annual report, a revision of the Agriculture in the Classroom teachers' handbook, a flyer describing new pre-weigh-in rules for the state's junior livestock shows, an enterprise budget workbook, and others.

He placed exhibits on Utah agriculture at the Utah State Fair, the Utah Education Association convention and elsewhere. Another major audio-visual effort was in preparing several videotape segments for use at the state Capitol's agricultural exhibit and writing the script for a longer resource conservation and development videotape presentation.

As secretary-treasurer of the Utah Junior Livestock Show Association, the information officer coordinated the purchase and distribution of cattle, sheep and swine ear tags in conjunction with new rules for improving the educational value of FFA and 4-H livestock programs.

Agricultural Development and Conservation

Several different sections in this division work in widely varied areas to help improve Utah farmers' and ranchers' economic strength and to help guard the state's natural resources. Following are some of the areas assigned to the division:

Soil conservation

Water quality

Agriculture resource development loans

Rural rehabilitation loans

Development of new water supplies

Agricultural enterprise development

Increased production efficiency and profitability

Coordination of agricultural research

Farm energy program

Liaison with the state Agricultural Advisory Board

SOIL CONSERVATION

Utah is divided into 38 soil conservation districts, and the policy-making group in this area is the Utah Soil Conservation Commission, with its members appointed by the governor. The main function of the soil conservation section is to work with districts and other groups in helping solve problems of erosion and to teach responsible land management to farmers and ranchers.

Every year, the division helps sponsor a Conservation Field Day in an area where special projects are in operation. The 1990 event took place in Ephraim in mid-June, with a focus on riparian areas.

A program of speakers, exhibits and tours to outstanding projects explains modern farming and ranching techniques to a large group of attendees each year.

Soil protection is demonstrated at Conservation Field Day.

The soil conservation section also works with other state and federal government agencies to administer portions of the national farm bill. A new bill is being written in Congress this year; the last farm bill enacted was the U.S. Food Security Act of 1985.

That bill established a conservation reserve program and other programs to hold marginal farmland out of production for conservation purposes. When farmers sign up in that program, they are not allowed to use the set-aside land for grazing or cropping except in an emergency such as a serious drought.

Besides protecting marginal land from erosion, the conservation reserve removes land from crop production in times of excess crops; if hard times come and production is needed from those fields, they are available and give improved productivity through conservation practices.

WATER QUALITY

With public interest running high in water quality, the work of this section has increased in the past year. Groundwater testing to check for pollution from agricultural sources has been under way for much of the report year; preliminary results show that pesticide residues are lower than expected, but continued monitoring is under way.

Because much of Utah's cropland is irrigated, the nonpoint source pollution activities of this section have a major impact on the state's agricultural industry. The program helps Utah landowners and users to manage their irrigation water and waste water systems so as to fall within federal and state pollution control standards. More runoff from feedlots, dairy lounging areas, and other agricultural facilities has been controlled in recent months and years than ever before.

More than twenty watersheds in Utah have been labeled as high-priority areas for nonpoint source pollution control programs. The designation calls for a management plan, and division staff members are working with officials to complete those plans and to help carry out the practices they entail.

A team of specialists from other agencies is working in the section on a special one-year assignment: to test the salinity of the Colorado River and to effect an action program to reduce the level of the salts. The group has identified eleven geographical areas for control work.

During the year, the section added an information officer to its staff to help issue news releases and edit publications dealing with the water quality program.

AGRICULTURE RESOURCE DEVELOPMENT LOANS (ARDL)

This low-interest loan fund is administered by the Utah Department of Agriculture through this section. The purpose of the loan fund is to help Utah farmers and ranchers implement soil and water conservation practices to protect and preserve our vital natural resources.

Because four consecutive years of drought have hit Utah's farmers and ranchers hard, the 1990 legislature

Development of more efficient farm irrigation systems is just one of many approved uses for ARDL loan funds.

appropriated $300,000 in additional loan funds to help deal with the drought conditions. That amount was added to the $15.1 million that has built up in the ARDL loan fund over the 14 years it has been operating. Although the legislature normally doesn't specify the uses of the money, this year they requested that it go to help drought-stricken farmers and ranchers.

More than $24 million in improvement projects have been funded over the years, and as farmers and ranchers pay their loans down, the money is lent again to maintain progress. Two loan officers work with prospects and current borrowers to help them obtain financing to implement their conservation practices.

ARDL loans have financed a wide variety of projects over the years. Some of the types of projects okayed for the program include:

- Strip-cropping systems and contour farming
- Rangeland moisture conservation and soil protection
- Reduced-tillage or no-till cropping systems
- Shallow-water areas for wildlife and wildlife habitat
- Animal waste control facilities
- Alternative chemicals and fertilizers
- Windbreak establishment and restoration
- Diversions and terraces
- Installation of irrigation systems

Loans made for rangeland improvements have helped multiply the livestock carrying capacity by several times.

RURAL REHABILITATION LOAN PROGRAM

During the Depression days of the 1930's, the federal government launched a program to help farmers hang onto their property in the difficult times. When the depression ended, the goverment gave the funds to the states to use as low-interest loan funds. The funds are used to help young individuals get started in farming. They are also used to help other farmers make their operations more effective through the purchase of more land, livestock or equipment.

The original federal fund was only $300,000, but interest earnings over the half-century of its existence has allowed the revolving loan fund to reach about $1.5 million today.

Loans are approved by the Agricultural Advisory Board and administered by the loan staff of this division.

WATER DEVELOPMENT

Utah has only one major undeveloped source of water left, the Bear River in the northern part of the state. It also flows through Wyoming and Idaho, which means that close cooperation is necessary to develop the two million acrea feet of water that flow into the Great Salt Lake in an average year.

Members of the division staff are working with water conservancy districts being authorized and set up in the affected counties to create and carry out a plan for storage and use of the Bear River water. As many as seven reservoirs might be built, over the years, to provide water for irrigation, wildlife, municipal and industrial uses.

The division also works with other water projects, such as the Central Utah Project, to help improve the productivity of the state's farm and ranch land.

RESEARCH GRANTS

State appropriations for reasearch are coordinated by the Division of Agricultural Development and Conservation, with grants going to researchers in a variety of projects. (See full listing on page 6 in this report.) This division not only tracks the funds to be sure the research is moving ahead; it also works to put the scientific findings into effect on Utah's farms and ranches, with the help of the department's Plant and Animal Industry divisions and others.

This use of tax money -- $150,000 during the report year -- has made a big impact on Utah's agricultural revenues and on reducing costs on the state's farms and ranches. Much of the UDA-sponsored research is carried out at Utah State University, but other responsible research teams are also involved.

FARM ENERGY PROGRAM

Support for this activity of the division comes from Utah Energy Office grants. Primary types of activity include:

- Development of irrigation water management practices that conserve energy.
- Carrying out energy audits on farms and ranches to spot waste and correct it.
- Conducting educations programs on energy conservation, for both adults and children, such as Ag in the Classroom.
- Providing equipment to teach conservation tillage.

Animal Industry

This division works in four important areas in supervising and enforcing state laws and programs affecting Utah livestock and animal health:

- Animal health, with special attention to animal diseases which can be transmitted to humans.
- Serology lab testing of animal blood for disease control.
- Animal identification -- brand registration and inspection -- to discourage livestock theft.
- Meat inspection to assure consumers of wholesome meat.

Aquaculture -- growing and processing food fish -- is a relatively new industry in Utah to which the Animal Industry division is giving increasing support.

ANIMAL HEALTH

The animal health bureau is involved in controlling and eradicating livestock and poultry diseases, checking the interstate movement of animals, upgrading the quality and wholesomeness of animal food products, and safeguarding the overall public health of Utah's citizens.

Scrapie

This very serious, slow, debilitating disease of sheep (and, in some cases, cattle) may take up to two or three years in the incubation period. Although the disease hasn't been present in Utah since 1957, it is so dangerous, and the sheep industry is so important to Utah, that state officials are working with other agencies to eradicate scrapie everywhere.

The director of the Animal Industry division, who is also state veterinarian, spent three weeks in Australia in the spring of 1989 helping conduct a training course and tour concerned with this disease. World leaders on scrapie research gathered there for the training and idea exchange.

In October 1989, international scrapie research leaders attended a meeting in Texas to discuss the direction international laws may take to control the disease. They also discussed the concept of negotiated rule-making, where representatives of industry and federal and state governments meet to discuss what kinds of laws should be put into effect, rather than federal authorities writing a proposed law, then considering state and industry suggestions.

Because of the fear of scrapie, rendering companies across the United States are no longer taking dead sheep for rendering, and they are only using sheep offal from inspected meat-packing plants. (Great Britain now has a serious problem with scrapie in cattle because of the long-time use of infected sheep carcasses in livestock feed products.)

Embryo Transfer for Scrapie Control

In this technique, being studied for possible scrapie eradication, a sheep embryo is transplanted from a donor ewe to a recipient. After the lamb is born, it must be observed for 60 months, because of the lengthy incubation period of the disease, to be sure it is really disease-free.

Researchers hope to find that the embryo is disease-free when it is transferred and that a new generation of non-diseased lambs can be used as foundation stock for clean herds. The embryo transfer technique is already being used to import superior genetics; as one researcher said, "A veterinarian can put a whole herd of superior animals in a suitcase and bring it to Utah."

Brucellosis

Utah livestock producers are fully supporting the rules for brucellosis control which were passed six years ago. The fact that Utah is a brucellosis-free state is important to the state's economy -- it means animals can be shipped in and out of the state more easily.

Vaccination protects cows from abortion and also safeguards human health. In 1989, about 140,000 beef and dairy calves were vaccinated in Utah as part of the brucellosis control campaign.

Other Diseases

Ram epididymitis, a disease affecting sheep, is under research study at Utah State University for control possibilities. Sheep foot rot is also being studied there.

A swine disease called pseudorabies is a virus which

Preventing and curing livestock diseases, whether the animals are in a feedlot or on open range, is vital for wholesome meat.

does not transmit to humans but which can be spread to cattle and other hogs. The division and the swine industry in Utah are working for total control; again, being declared a pseudorabies-free state will carry economic benefits in unrestricted interstate marketing.

Another serious problem is trichomoniasis in cattle. "Trich" is a venereal disease; a new vaccine is available and is being tested, but it is only cleared for use with females.

Because of its implications to human health, disease control work in animals not considered livestock is important to UDA and all citizens of Utah. Such species include exotic birds, rodents, snakes, wild birds, fish and others. A year ago, UDA, Wildlife Resources, and Public Health issued a joint publication dealing with the control, importation, possession and transportation (CIPT) of non-livestock animals.

SEROLOGY LABORATORY

This important laboratory conducts hundreds of tests every day to analyze animal blood for brucellosis, leptospirosis, vibriosis, anaplasmosis, bluetongue, and equine infectious anemia. The facility is vital in the Animal Industry division's battle to control animal diseases.

Identifying and controlling these diseases has a great impact on safeguarding human health. The test results are applicable to humans and are correlated with the Utah public health system.

Other diseases under the careful scrutiny of the state veterinarian are tuberculosis in pheasants, pullorum in chickens and pheasants, and avian influenza in poultry. All three have caused problems in Utah in recent years. The division also monitors cattle for tuberculosis constantly because of the disease's possible effect on humans.

UDA is also examining disease complaints in privately owned fancy chickens and game birds.

MEAT INSPECTION

Like the other food inspection services of UDA, the meat inspection bureau assures Utahns that only safe, inspected products are offered for sale in the state. Meat inspectors make sure that all meat products are wholesome, unadulterated, and properly marked, labeled and packaged.

Utah's meat inspection program has been accepted by the federal government, which labels it one of the best plans in the nation. It is saving thousands of travel dollars for Utah taxpayers through local training and certification of meat inspectors. All the people hired recently have been trained and have passed federal certification reviews right here in the state -- a process taking four to five months.

Talmage-Aiken Act

Inspectors working under this legislation are known as TA inspectors. Utah's state meat inspectors are cross-licensed as federal inspectors; because of that, provisions of the TA law allow certain packing plants in Utah to ship meat across state lines with state inspectors present in the plants. They do the federal inspection that interstate shipment requires. Most Utah packing plants don't ship out of the state and only need state inspection.

Because of the increased interest in Talmage-Aiken inspected plants, however, UDA hired another veterinarian in meat inspection in June 1990. The department will also hire another non-veterinarian inspector in late 1990 because of the increase in the number of plants being inspected.

ANIMAL IDENTIFICATION

This bureau handles the registration and inspection of brands, often encountering livestock theft being attempted. A total of more than 37,000 brands were under registration at the end of the 1989 report year.

Ten full-time and about 45 part-time brand inspectors located all over Utah check brands at livestock auctions, ports of entry, roadblocks and elsewhere. Utah law states that all livestock owners moving or showing their animals must have proof of ownership with them; brand inspectos look at this paperwork to protect owners from theft.

As livestock thieves are finding out, UDA's enforcement of brand inspection laws is effective -- thefts are detected and

Having a good, top quality piece of meat to cut at the retail level also depends on a rigid meat inspection program.

solved quickly, with close cooperation existing between inspectors and law enforcement officers at the county and local levels. Stiff fines and jail sentences have been handed down in recent years, resulting in a sharp drop in livestock theft cases reported in 1989.

Because the livestock industry has requested it, all of Utah's full-time brand inspectors and the state veterinarian are now police academy-certified. This has always been permitted under Utah law, however, the increased enforcement was requested during recent years when thefts were increasing. This certification gives inspectors broader flexibility in their investigations.

Inspectors were able to return 1,452 cattle, 184 horses, and 220 sheep with a total value of about $1,338,423 to their rightful owners during the report year. They also checked about 700,000 head of cattle and 21,000 horses last year as the animals were being sold, transported, exhibited or slaughtered.

Through good cross-utilization between the animal health and animal identification bureaus, brand inspectors watch for signs of health problems in livestock and report them to the state veterinarian.

Checkoff funds for beef marketing and research totaling $600,000 were collected by brand inspectors in 1989.

This bureau is in the process of renewing 37,000 cattle, sheep and horse brands and earmarks. Following this renewal process, which ends in December 1990, the bureau will publish a master brand book for public information.

Chemistry Laboratories

With the increased concern about water quality and the Utah Department of Agriculture's interest in groundwater research, the major improvement in chemical analysis during this report year was very timely. It was the addition of testing equipment (a GC/MS unit) that can perform quick analysis of water, milk and other samples to check for the presence of pesticides and other agricultural products. Chemists can now separate malathion and parathion in a sample, for instance. Analysis for the same sample required a much longer time before the GC/MS unit was bought.

Two separate laboratories make up this division, the chemistry laboratory and the bacteriology laboratory. The first handles the analysis of meat and meat products and runs tests on feed, fertilizer and pesticide samples.

The bacteriology lab handles analyses of milk and dairy products and does water testing. It runs analyses for the department's Food and Dairy section, including testing raw milk for somatic cells, bacteria count, and the presence of antibiotics. It also runs SPC and coloform tests on processed milk. When a problem is suspected on a dairy farm, this lab also does testing for butterfat.

Lab scores No. 1 in nation for accuracy

National recognition came to this division in early 1990. High scores in check sample testing gave the Utah Department of Agriculture chemical laboratory the number one rating in feed-testing accuracy in the nation for the first four months of the year. The facility topped a list of 190 participating laboratories throughout the United States.

Check sample testing is a monthly procedure used to test chemical laboratories' accuracy and other factors. The Association of American Feed Control Officers operates the feed-testing program. It involves the association sending several samples of one type of feed each month to every lab taking part in the analysis program. Chemists at each laboratory perform quantitative analysis on the samples, using test equipment and chemicals to analyze the feed for moisture, protein, fiber, ash, salt, calcium, phosphorus and zinc.

After the labs return their analyses, AAFCO scores them on bias, precision and accuracy, the most important factor being accuracy.

In the feed analyses from January through April 1990, UDA's laboratory ranked first in accuracy, sixth in precision and seventh in bias in the nation.

Besides checking its techniques in feed analysis, the Utah lab takes part in check sample programs in fertilizer, pesticides, meat, and dairy testing. While only the feed check sample program provides rankings for the laboratories, all of the testing programs allow participating labs to check their techniques and make corrections, if necessary.

Lab credibility helps in trial testimony

The state chemist, who is director of this division, explains that high scores in check sample testing give a laboratory credibility in court testimony when the results of lab analysis are involved in a trial. The high scores also assure consumers that analyses of food and dairy products will yield reliable results and help the state Department of Agriculture maintain safe, wholesome products on grocery store shelves.

Although consumer complaints about food and other products total less than half of 1 percent of all analyses performed by the laboratories -- about 150 a year out of some 35,000 total analyses, they are urgent when they do come in, because human health is usually involved. Reasons for such testing include suspected foreign matter in food, possible problems with fungus, and a wide range of other causes. Laboratory analysts check to see if a complaint is valid; if so, they turn the matter over to compliance officers in the department to deal with the problem.

Testing on upholstered products is critical

Labels on such products as down-filled hunting jackets, sleeping bags, pillows, and quilted upholstery fabrics give guarantees of content that must be checked carefully. Some products involve allergies, some involve risks to health and safety when mountain weather is a factor, and all involve cost. Down -- the small under-feathers of ducks and geese -- sells for one of the highes prices per pound of any product in the world, and label accuracy is usually the only way a buyer can be sure the price is fair.

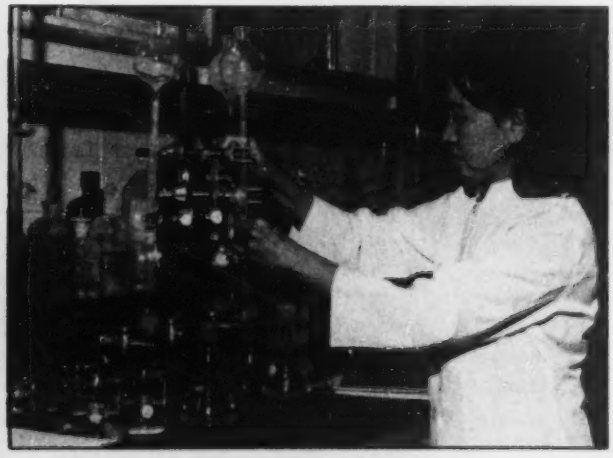
When chemists test such products to check label accuracy, they must separate and weigh down, feathers, fiber, various types of man-made materials, and other contents.

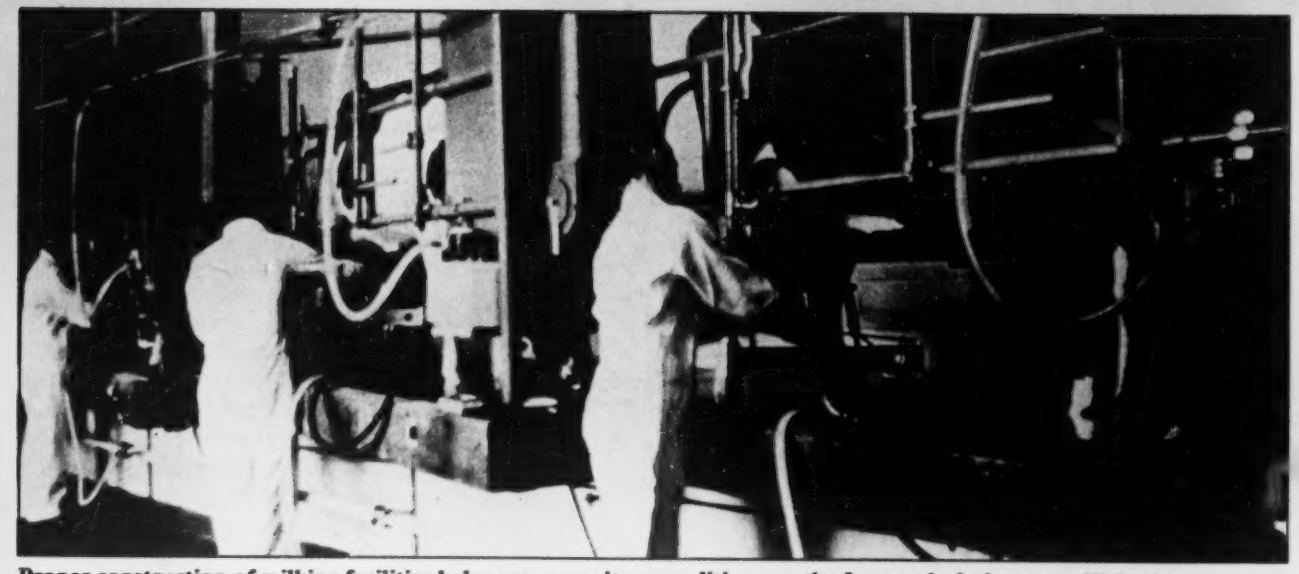
Consumer concerns have led to recent increases in the number of samples analyzed for lead in gasoline, alcohol in anti-freezes (including windshield washer solvents), fat in ice cream, and sulfamethazine in milk, among others.

The laboratories are operating about at capacity, given the size of staff and amount and sophistication of equipment. And while testing accuracy is a major concern, quick service -- a short turn-around time for samples -- is also important. Test results are getting back to users more rapidly than in earlier years, with a higher degree of reliability.

All these improvements are aimed at one major goal: to help assure Utahns of quality in the products they buy.

Laboratory work helps most UDA divisions do their job.





Proper construction of milking facilities helps assure sanitary conditions on the farm and wholesome milk in the store.

Food and Dairy

Maintaining a close watch over the quality and correct labelling of Utah's retail food supply is the function of this section. With the supervision and help of a small office staff, its inspectors conduct regular inspections at dairy farms, food and dairy processing plants and outlets, poultry processing plants, egg packing plants, furniture and bedding factories, retail outlets for quilted clothing, and other businesses all across Utah.

An agricultural investigator and administrative law judge handle situations requiring legal action.

FOOD AND DAIRY INSPECTION

Ten food and dairy inspectors regularly check about 740 dairy farms, about 30 dairy processing plants, and about 2,100 food establishments. In 1989, all types of inspections added up to a total of 5,932.

Among the types of establishments that the section regulates are: grocery stores, bakeries, meat markets, warehouses, canneries, bottling plants, candy factories, flour mills, rabbit processors, and any other establishments that produce, process or sell food products at wholesale or retail.

Some of the things inspectors look for in a food establishment are:

- Proper construction for good sanitation.
- Production of products with the use of good manufacturing practices.
- Use of good hygiene by employees.
- Equipment that is kept clean and in good repair.
- Proper use and storage of toxic chemicals.

In retail food outlets, the inspectors also watch for accurate labeling of ingredients and health claims made on package labels which may be unsubstantiated or inaccurate.

Both Grade A and manufacturing milk producers' farms are subject to regular dairy farm inspections. UDA inspectors check to be sure that both the animals and the physical facilities comply with state standards. Inspectors also help educate dairymen on the proper use of antibiotics and other animal drugs in order to avoid illegal residues in milk and other dairy products.

Delivering a wholesome milk product to the dairy plants is the final goal of all dairy farm inspections. To assure this, milk haulers and their trucks also receive regular inspections to be certain that proper procedures are followed. Otherwise, milk quality can deteriorate during transportaion from farms to processing plants.

Some of the newest and most sophisticated dairy plants are located in Utah. This is an exporting state for dairy products, and Utah enjoys a fine reputation for high standards and excellent quality.

Maintaining this reputation, and the resulting revenues for the state, requires that the Utah Department of Agriculture's food and dairy inspectors stay up-to-date on the latest dairy processing equipment and procedures.

RETAIL MEAT INSPECTION

Inspecting meat processing plants falls under the Animal Industry division in UDA, but enforcing Utah's meat laws and investigating suspected violations is handled by the Food and Dairy section.

Inspectors review all establishments that handle meat products, checking on meat packages to assure that products requiring inspection have been inspected. They also check labels for accuracy and collect samples of ground beef to be sure the meat complies with state standards.

When inspectors locate products that don't bear an official meat inspection mark or which may be from an uninspected source, they investigate these violations.

This year, special watch was maintained to be sure cross-contamination, especially between meats and fish, was avoided in the stores.

EGG AND POULTRY GRADING

To be sure that Utahns get a supply of safe, wholesome eggs and turkey meat, UDA's Food and Dairy section maintains a staff of egg and poultry graders working both in processing plants and in retail stores.

Each egg processing plant in the state sends its dirty eggs, checks (cracked eggs), and leakers to one so-called breaker plant in Salt Lake City. There, an inspector keeps an eye on those eggs while they are broken and pasteurized before the processor sells them to bakeries and other large-quantity users. Utah has only one laying hen operation which is a USDA-approved shell egg plant.

Almost all Utah chickens are laying hens; the state has no commercial broiler industry. Therefore, all UDA poultry graders are in the turkey processing plants of central Utah, where production has been declining.

Another type of egg-grading operation is in the state's retail stores. UDA employees check for grade, size and wholesomeness in each store about every three months. Concern among consumers over salmonellosis has put additional importance on this type of grading. Another food safety issue is that of cholesterol content; egg graders carefully check wording on packages that refers to cholesterol to be sure the information is accurate.

One emphasis of the Food and Dairy section during the report year was to require that eggs be held at lower temperatures in retail stores by keeping them in a cooler.

BEDDING, QUILTED CLOTHING, AND UPHOLSTERED FURNITURE INSPECTION

Utahns are able to take many things for granted when they buy products at wholesale or retail in the state. They normally assume they are getting an accurate weight or measure; wholesome foods; and safe, sanitary bedding and upholstered furniture.

One investigative officer inspects the last two items plus quilted clothing for UDA. One method he uses is to study classified and display advertising in the daily newspapers. That keeps him informed on products and services in his area of responsibility that are being sold through such advertising.

Upholsterers who renovate furniture and bedding items are required by state law to be licensed. The law also requires them to tag items they work on with a green-colored owner's material tag indicating what work was done on each specific article of furniture or bedding. Those procedures are for the protection of Utah consumers, who rely on UDA's licensing and inspection processes to guarantee that buyers get what they pay for.

Some furniture renovators try to avoid the cost and scrutiny of licensing in order to charge more than what their work is worth; checking furniture and bedding repair ads helps the supervisor of this section to track them down and enforce the law.

Ask to see the upholsterer's state license -- that's sound advice for consumers wanting to have an upholsterer make or repair furniture for them. (A wallet-sized copy of each license is provided by UDA.) This request assures the buyer that the supplier has been inspected and has the law tags to attach to the furniture or bedding items. The customer should also check for the green tags when taking delivery of the furniture.

Down-filled items, such as winter jackets, sleeping bags and similar items, are another problem for UDA.

Most of the commercially used down -- the soft under-coating of ducks and geese -- in the world comes from China, and pound-for-pound, it is one of the most expensive items for sale in the world. For that reason, manufacturers of items advertising down content are tempted to cut costs by adulterating the down with waterfowl and landfowl feathers.

Misrepresentation of the amount of down in items offered for sale, both in advertising and on hang tags, is a widespread practice in the industry. To guard against it requires constant vigilance by the UDA inspector.

Part of the problem is that many purchasers aren't familiar with the terms and requirement of such products. Understanding the loft factor -- the insulating value of down -- and percentage requirements are important. (See box below for more information.)

WHAT TO LOOK FOR ON THE LABEL OF A PRODUCT CONTAINING DOWN

- **To be advertised as down-filled, a product must contain not less than 70 percent down clusters and no more than 10 percent down fiber, or 80 percent total.**
- **When a label shows "80 percent down," it means that the product contains 80 percent of the 70 percent down clusters required.**
- **Thus, a product advertised as 80 percent down might only contain 56 percent down clusters, 8 percent down fiber, and the balance in waterfowl feathers or other materials.**
- **Read the label carefully, and understand the terms!**

Checking for accurate labeling of products containing synthetic fibers treated with resin is necessary to protect consumers, because resin, after a period of time, will dry and flake. This can then cause sneezing in some individuals.

Treating bulk fibers with resin bonds the material together and helps avoid its shifting inside the product. It also adds weight, which usually increases the revenue from such materials. But resin triggers some allergies and needs to be mentioned on the label.

AGRICULTURAL INVESTIGATOR

With the addition of a trained and experienced investigator to the Food and Dairy section staff a little over a year ago, the enforcement of state regulations in this area has become easier. Motor fuel compliance, the purity of health foods sold in Utah, and other special areas of interest occupy a good part of his time.

Another program he enforces is the "Products of Utah" laws, which require agricultural product dealers to be licensed and bonded.

Marketing and Promotion

Working for a stronger agricultural and agribusiness economy in Utah, this division uses a variety of techniques and programs to help develop new markets for Utah products and increase sales in the markets already being reached.

Following are brief reports on some of the programs and materials created to encourage economic development in Utah agriculture.

"UTAH WORKS"

While advertising funds are not being maintained at the start-up level for this three-year-old program, its logo is still being added to new cooperators' products and packages, encouraging Utahns to choose a Utah product or service when they have an equal choice.

More than 180 businesses -- food processors, retail grocers, clothing manufacturers, and many other types -- have signed up in the program, and 2,000 stores have received shelf talkers, window decals, banners, product markers and other promotional material. Cooperators use the logo in their advertising, on calendars, on labels and in other ways.

Mass media campaigns have focused on the wide variety of Utah businesses, on logo recognition, and on the advantages of patronizing Utah suppliers.

EXPORT PROMOTION

Efforts to increase sales of Utah products overseas have taken several directions during the report year.

In one program, the Utah Department of Agriculture and Utah Department of Community and Economic Development have entered a joint contract with the U.S. Meat Export Federation. That national group has offices in Asia and is promoting Utah beef around the world, especially in Pacific Rim nations where much of the West's export products go.

Major beef promotions in Japanese stores have led to increased purchase there of American-type beef, which is leaner, healthier, and much lower in price than the wagyu beef that Japanese consumers have traditionally bought. Many families in Japan had never tasted American-type beef until the Meat Export Federation and other groups gave out samples in the stores.

Sales of U.S. beef have multiplied in the Pacific Rim and will continue to increase -- Japanese trade barriers to large imports of foreign beef will lift in April 1991.

Feeding tests are also being conducted in Utah to try to meet the traditional Oriental market for beef with heavy fat marbling. Cattle are being fed in Cache county for slaughter and processing there and for shipment to a Japanese grocery chain which owns an interest in the feeding operation.

Other export-promoting projects include an export seminar at Utah State University in early 1990, jointly sponsored by UDA, the university, and other groups. A regional beef export seminar was held in Sun Valley a few weeks later, with good attendance from the Beehive state.

Federal TEA funds -- trade enhancement assistance -- are available to Utah exporters. A few companies are already taking advantage of the marketing assistance; others are investigating the possibility.

HAY MARKETING PROGRAM

Encouraging hay buyers and sellers to get in contact with each other, UDA's marketing and promotion division has just published a hay directory with separate sections for farmers who have supplies of hay for sale and livestockmen looking for sources of supply. The list of buyers includes both in-state and out-of-state names, addresses and phone numbers.

Not only will the new directory encourage more agricultural revenue for Utahns; it has also helped build a mailing list of livestockmen for other promotional efforts by the division.

LAMB PROCESSING PLANTS

Utah, sixth in the nation in sheep and lamb numbers and a good consumer of lamb, has gone for years without a packing plant that would handle enough carcasses to come close to meeting market demand.

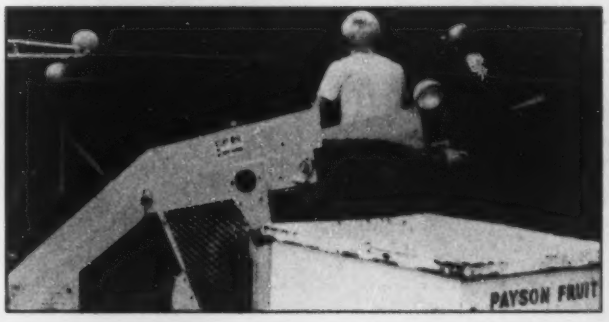
During the report year, packing plants began processing lamb in Laketown, Spanish Fork and Springville, Utah. The state is still importing lamb from Colorado and other Western states, and efforts continue to keep those processing dollars and jobs in-state to boost the Utah economy. As with other products, paying shipping costs to send animals out of state, then to bring the meat back to Utah, raises consumer costs and deprives Utahns of jobs they could hold here.

VALUE-ADDED PROJECT

This project is encouraging farm producers and food processors to keep some of the processing work in Utah that has been done outside the state in years past.

Although a freeze in April 1990 destroyed a large percentage of the state's fruit crop, several projects are underway to process jellies, jams, syrups and other items. New fish products are being put on the market by Utah's trout hatcheries, partly with funding for new equipment from this project. A real stimulus for the Utah economy, this program will probably grow during coming years.

Utah has joined a national tart cherry marketing program.



Plant Industry

Utah's state law contains 12 agricultural statues, and eight of them are enforced by this division. They cover insect pests, noxious weeds, plant diseases, seeds, feeds, fertilizers, agricultural chemicals, nursery plants, grain grading, and other areas requiring inspection, licensing and enforcement.

Carrying out this responsibility protects the state's plant producers, middlemen and consumers. To do it, the Plant Industry division employs a wide variety of staff members. Specialists in pesticides and fertilizers; noxious weeds; fresh fruit and vegetable inspection; entomology; and grain, seed and feed inspection plus a field staff of 15 agricultural inspectors carry out this work.

ENTOMOLOGY

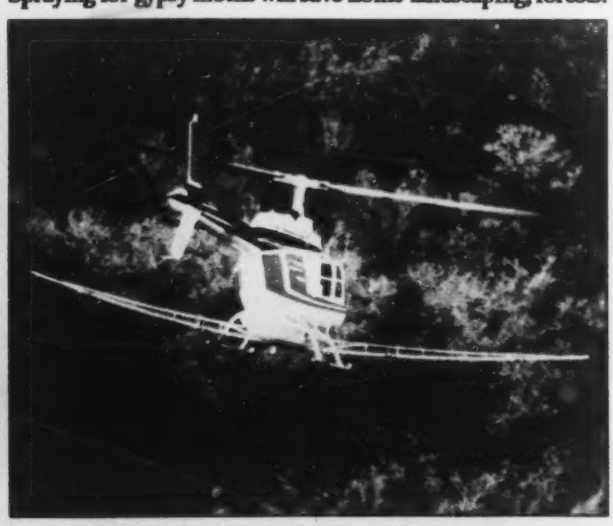
Several insect pests are at the infestation level in Utah this year. Gypsy moths threaten the Wasatch Front watershed, forests, orchards and private home landscaping. Grasshoppers and Mormon crickets are attacking crops and rangeland in almost every section of Utah. Russian wheat aphids, black grass beetles and others are high in population in the state.

At the same time, some effective agricultural chemicals are being taken off the market, either voluntarily by the manufacturers or by Environmental Protection Agency (EPA) action. Each loss of a chemical, without a suitable replacement, costs consumers additional food dollars, economists affirm.

The current report year is the second year of gypsy moth control efforts. Extensive trapping in 1989 confirmed infestations in Davis, Salt Lake and Utah counties, and a cooperative control effort between local, state and federal government agencies has resulted. This year's spray program is covering more than 20,000 acres; a companion quarantine requires inspection of recreational vehicles and other egg-carrying materials moving out of a 150,000-acre area.

Van Burgess, director of Plant Industry for UDA and coordinator of the gypsy moth program, estimates that it will take three to four more years of control measures to eradicate the insect, which has destroyed hundreds of thousands of acres of trees in the Northeast.

Spraying for gypsy moths will save home landscaping, forests.



Use of poison bait in populated areas and aerial spraying in remote areas is helping to control grasshoppers and Mormon crickets, but the loss is devastating in heavily infested areas. Several temporary UDA workers are handling control efforts in locations all over the state. The 1989 fall adult grasshopper survey indicated that Utah had about 114,000 acres infested with grasshoppers and 24,000 acres infested with Mormon crickets.

A new computer and a special mapping program are helping division employees to produce maps outlining the insect problems and to plan control strategies. Several UDA employees plus representatives of other government agencies received training on the new equipment in April 1990 and made immediate use of the technology for insect control.

A program to control apple maggot in Utah orchards moved forward during the report year. Part of the problem has been the legal difficulty of removing abandoned orchards held by absentee owners. Action by the governor and the commissioner of agriculture removed some legal barriers.

Since the program started in 1985, about 50,000 trees have been removed. About 250 fruit growers receive counsel each year on orchard spray management.

Utah's bee colonies are inspected rigidly each year to control the Varroa mite, a serious threat to the state's honey production. Disease conditions are very low here -- under 1 percent.

FERTILIZERS

The Plant Industry division registered 1,558 different fertilizer and soil amendment products from 241 manufacturers in 1989. On 996 visits to dealers around the state, inspectors collected 377 samples for analysis; only 31 failed to meet label guarantees. The division also licenses fertilizer blenders.

COMMERCIAL FEEDS

Plant Industry division employees registered 3,995 different feed products from 504 suppliers in 1989, an increase in products of about 14 percent over the previous year. Inspectors made 1,164 inspection trips to 548 establishments. They collected and tested 438 feed samples during the year, some packaged and some bulk; of those, 48 failed to meet guarantees, and sales of eight products were placed under a Hold Order.

Utah livestock owners have to assume, when they buy commercial feed, that the product is of good quality and that the nutritional content is what is represented to them. UDA safeguards that trust by conducting its program of registration and inspection diligently throughout the year.

FRESH FRUIT AND VEGETABLE INSPECTION

Every year, the division staff makes several thousand inspections of tart and sweet cherries, onions, apples, peaches and seed potatoes to protect the state's export markets for

Taking fertilizer samples is part of an ag inspector's job.

fruit. Inspectors issue a certificate that serves as a third-party verification of grade in case of a dispute over quality and condition of a shipment.

These inspections are usually done at a processing or shipping facility, but they are sometimes performed on individual farms. The program is important to Utah's economy because a high percentage of Utah's fruit production is shipped out-of-state.

GRAIN INSPECTION

This work of the division is done at the grain inspection facility in Ogden, where new sampling and testing equipment has sped up the process of grain testing.

Samples of grain taken from truckloads pulling through the enclosed building are checked for moisture and protein content, foreign matter, and insect damage. Testers then issue an inspection certificate that protects both the seller and buyer of the grain.

Due to the continuing drought in Utah, the number of samples tested in 1988-89 was down from the previous year. Not only was grain production reduced in the state -- with every county being declared a disaster area -- but many livestock owners bought less grain, having reduced the size of their herds because of poor grazing conditions.

NURSERY INSPECTION

Every year, the division licenses all firms and individuals selling nursery stock. Licenses totaled 483 in 1989. Inspectors also visit those nurseries to enforce state laws pertaining to labeling, healthy condition of plant stock, and freedom from serious insect and disease pests. They provide inspection certificates to permit interstate shipment of stock.

PESTICIDES

Environmental and wildlife groups and the EPA scrutinize the division's work with pesticides closely because of their concern for the environment. The division licenses and monitors pesticide dealers, issuing licenses to 649 pesticide manufacturers in 1989 for a total of 6,667 products. Of those, 101 were new products cleared after investigation.

Staff members made 1,107 inspections of pesticide sales establishments and collected a total of 189 samples.

Another activity of the division in this area is to conduct pesticide applicator training and certification. EPA, which oversees this program nationally, has singled out the Utah program for high praise. In 19 training sessions around the state in 1989, a total of 787 new applicators were certified and 694 applicators recertified. Of a total of 213 investigations of pesticide use, only 28 violations were found.

New chemistry laboratory equipment has allowed much faster analysis of water and other liquids for pesticide residues; that lab work indicated very low residues in groundwater -- always below safe tolerances.

SEED TESTING

In this area as in other inspection programs, consumer confidence is the goal, especially since so many city homeowners buy small quantities of seeds without studying the products as most farmers do. UDA employees conducted 2,062 inspections at 638 seed sales outles in 1989.

In the seed laboratory at the Utah Department of Agriculture building, analysts tested 2,694 samples, conducting 8,820 different tests to check for label accuracy. Only 112 violations were determined. Besides the lab tests, 583 samples were taken in a drill box survey in farm fields.

Analysts in the state seed laboratory have completed the giant work of cataloging 1,400 samples of farm, garden, tree and shrub seeds in UDA's seed herbarium and converting the catalog to a computer database for easier reference.

NOXIOUS WEED CONTROL

Controlling the worst of Utah's many varieties of weeds is a joint effort by county weed organizations, federal land-management agencies (BLM and the Forest Service), private landowners, and the division's weed specialist, who coordinates the activities. The goal of the weed specialist is to enforce the state's noxious weed law, a protective measure to help the crop and livestock producers.

On private cropland, greater profit from higher yields is the motivation for weed control. The same motivation exists for ranchers grazing livestock on public land; higher-quality forage increases the feeding value of grazing allotments, and weed control cuts losses of animals to toxic plants.

Much of Utah's noxious weed problem occurs on state and federal land, which makes up about 70 percent of the total land area in Utah. To work out the control problems, the weed specialist coordinates interaction between the division's agricultural inspectors and U.S. government agencies, utility companies, county weed supervisors and boards, and private landowners.

In 1989, inspectors made 1,710 visits to these groups and to weed infestation areas for inspections. They also conducted surveys of the more serious infestations and worked with Extension and research personnel to encourage the use of the most effective control methods.

MISCELLANEOUS ACTIVITIES

Division employees also check fresh produce at grocery stores and fruit stands, attend community and state agricultural meetings, take part in training workshops, and act as goodwill representatives for the department.

Weights & Measures

Three major areas of activity take up most of the time of UDA's Weights and Measures division employees:

- Inspecting and certifying all commercial weighing, measuring, counting and timing devices in Utah.
- Inspecting all food and non-food products sold in Utah to be sure the weight or measure on the label matches the contents of the package.
- Regulating motor fuels to verify that the contents and octane rating are as represented at the pump.

INSPECTING AND CERTIFYING DEVICES

The variety of types of equipment which the division's inspectors check and certify is as great as the creativity of the nation's inventors. Some are obvious, such as grocery store and postal scales, parking meter timing devices, and scales at cement batch plants. (All portable scales have to be checked every time they're moved.)

Others are less apparent -- belt scales at mines, taxi meters, propane pumps at service stations, pill-counters in pharmacies, railroad scales, and fabric meters in dry goods stores, among countless others.

The division aims to check all such devices in the state at least once a year. Many items, such as grocery and meat scales and fuel pumps, are checked much more often; a seal is applied to such devices to assure the public that they weigh or measure accurately.

To handle this work, the division has about 13 inspectors and laboratory technicians traveling the state and operating three laboratories in the Salt Lake City department headquarters. Those laboratories are:

Cryogenic (vapor meter testing)

Motor fuel lab

Metrology (checking standard weights and other measurement devices used in inspections)

Thousands of devices are inspected each year on location all over the state, where items are sold commercially. Several weight trucks take large weights around to check such scales as those at livestock auctions and concrete plants; a self-propelled, hydraulically operated weight cart invented by a division employee eases the task of getting the weights in and out of buildings.

New equipment for checking scanners in grocery stores has just been acquired by the division. Formerly, inspectors had to pull containers off the shelves, making a note of shelf prices, then carry them to a check-out counter to verify that the correct price was read by the scanner and entered in the store's computer. Finally, the inspectors returned the products to the shelves. Now, division employees will use a portable wand to record the bar code information from the product and punch in the shelf price, then verify the pricing without moving the actual products.

CHECKING LABELS ON FOOD AND NON-FOOD PRODUCTS

Every year, a few special problems show up in the state's retail trade that cause increased testing to take place for the products involved. The accurate measurement of firewood is an example. If wood is sold by the cord, a pile should measure 8 feet long by 4 feet wide by 4 feet high. But consumers seldom check because the wood usually isn't stacked neatly by the supplier.

Another area being inspected carefully, with the help of chemical laboratory testing, is the anti-freeze protection of windshield washer solvents. Analyses indicate that very few give protection to the lowest temperature specified on the container label.

The division checks the number of pills in a bottle, the length of clothesline in a package, the number of tacks in a box, and every other type of non-food packaging. Its inspectors make thousands of tests on retail packages and bulk commodities every year.

MOTOR FUEL REGULATION

In the last two or three years, a number of consumer complaints have led to increased testing in this area. Inspectors found regular, leaded gasoline being sold as unleaded fuel, for example. The current phasing out of regular gas may reduce complaints somewhat, but the new unleaded fuels will still make testing by the division necessary.

As the number of service stations continues to increase rapidly, along with convenience stores with gas pumps, this type of inspection will continue to be in more demand.

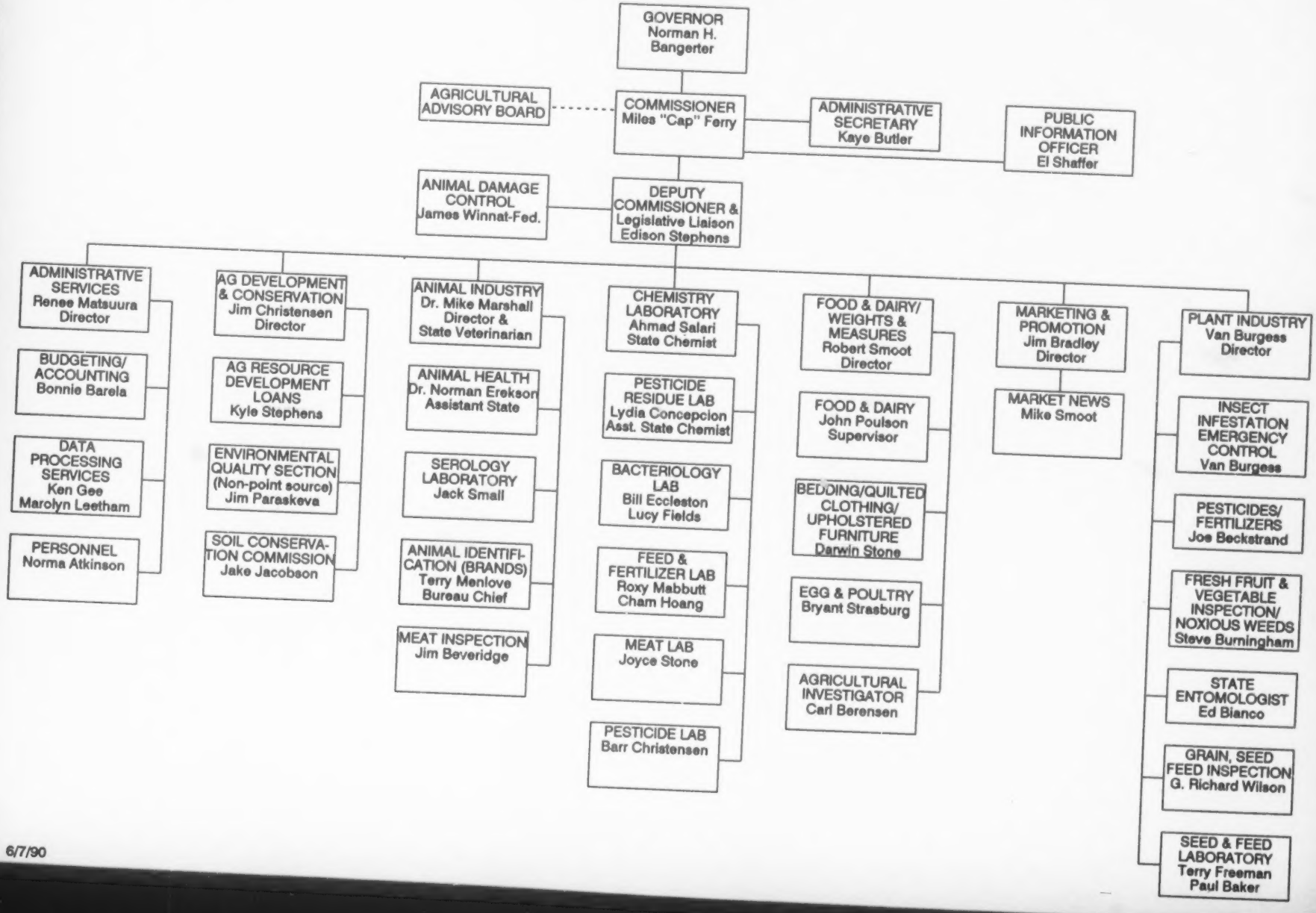
SOLVING PROBLEMS

When a weights and measures inspector finds a problem -- for example, the number of clothespins in a package is less than the label states, he first has the store manager remove the product from the sales floor. The inspector then tries to determine if the error is intentional or due to faulty equipment, negligence, poor training or another cause. If the problem is in-store, he cautions the store manager to correct it; if the problem comes from outside, he or another division employee will try to get the label corrected.

If follow-up inspection reveals that the problem is still present, UDA's options under state law include writing a warning letter, issuing an administrative order to cease and desist, or even levying a fine and settlement agreement.

Consumer protection is important to the division, of course, but so is protection of the good name of a business. Inspectors tend to work with a business owner to clear up problems without endangering employees' jobs or cutting off a source of community, county and state tax revenue.

STATE OF UTAH
DEPARTMENT OF AGRICULTURE
ORGANIZATION CHART



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UTAH AGRICULTURAL STATISTICS - 1990

Population of Counties, Utah

County	U. S. Census - April 1, 1980						July 1, 1989 Est. 2/
	Total	Urban		Rural			
		Total Urban 1/	Percent of Total	Total Rural	Places of 1,000 to 2,500	Other Rural	Total
Beaver	4,378	--	--	4,378	3,085	1,293	4,800
Box Elder	33,222	19,060	57.3	14,162	3,730	10,432	38,400
Cache	57,176	38,464	67.3	18,712	11,095	7,617	71,700
Carbon	22,179	11,810	53.2	10,369	3,348	7,021	21,500
Daggett	769	--	--	769	--	769	650
Davis	146,540	143,499	97.9	3,041	--	3,041	187,000
Duchesne	12,565	3,842	30.6	8,723	1,677	7,046	12,800
Emery	11,451	--	--	11,451	8,209	3,242	11,300
Garfield	3,673	--	--	3,673	1,343	2,330	4,100
Grand	8,241	5,333	64.7	2,908	92	2,816	6,500
Iron	17,349	10,972	63.2	6,377	1,836	4,541	19,500
Juab	5,530	3,285	59.4	2,245	--	2,245	5,800
Kane	4,024	--	--	4,024	2,148	1,876	4,900
Millard	8,970	--	--	8,970	4,013	4,957	13,000
Morgan	4,917	--	--	4,917	1,896	3,021	5,850
Piute	1,329	--	--	1,329	--	1,329	1,550
Rich	2,100	--	--	2,100	--	2,100	1,850
Salt Lake	619,066	613,466	99.1	5,600	--	5,600	712,000
San Juan	12,253	3,118	25.4	9,135	1,929	7,206	13,000
Sanpete	14,620	2,810	19.2	11,810	6,470	5,340	16,800
Sevier	14,727	5,482	37.2	9,245	3,468	5,777	16,000
Summit	10,198	2,823	27.7	7,375	2,095	5,280	14,000
Tooele	26,033	18,754	72.0	7,279	2,745	4,534	27,800
Uintah	20,506	6,600	32.2	13,906	2,216	11,690	21,000
Utah	218,106	197,267	90.4	20,839	6,843	13,996	267,000
Wasatch	8,523	4,362	51.2	4,161	1,196	2,967	10,000
Washington	26,065	14,442	55.4	11,623	5,635	5,988	45,100
Wayne	1,911	--	--	1,911	--	1,911	2,100
Weber	144,616	127,671	88.3	16,945	2,379	14,566	159,000
State Total	1,461,037	1,233,060	84.4	227,977	77,446	150,531	3/ 1,715,000

1/ Urban population includes persons living in areas or places of 2,500 inhabitants or more. 2/ State Office of Planning and Budget, State of Utah. 3/ May not add due to rounding.

Farm Population vs. Total Population, Utah, 1920-1980 Censuses

Year	Total Population	Farm Population	
		Number	% of Total
1920	451,000	141,000	31.3
1930	508,000	116,000	22.8
1940	550,000	105,000	19.1
1950	689,000	81,000	11.8
1960	891,000	65,000	7.3
1970	1,059,000	38,000	3.6
1980	1,461,000	N/A	N/A

"Farm Population Estimates" Rural Development Service, USDA Statistical Bulletin.

Top Six States by Agricultural Category,
Utah's Rank and United States Total

Category	Unit	First	Second	Third	Fourth	Fifth	Sixth	Utah's Rank	United States Total
GENERAL									
No. of Farms &		TEXAS	MO.	IOWA	KY.	TENN.	MINN.	37	
Ranches, 1989.....	Farms	186,000	108,000	105,000	96,000	91,000	90,000	13,000	2,172,920
Land in Farms	1,000	TEXAS	MONT.	KANSAS	NEBR.	N.M.	S. DAK.	28	
& Ranches, 1989.....	Acres	132,000	60,000	47,900	47,100	44,500	44,300	11,300	991,473
Value of Farm Real	Mil.	TEXAS	CALIF.	ILL.	IOWA	NEBR.	MINN.	38	
Estate, Jan. 1, 1990 1/..	Dollars	66,853	54,868	40,355	37,860	26,486	24,942	4,562	685,048
Cash Receipts from	Mil.	CALIF.	TEXAS	IOWA	NEBR.	KANSAS	ILL.	38	
Farm Marketings, 1988....	Dollars	16,598	10,281	9,074	7,979	6,594	6,461	687	151,431
FIELD CROPS									
Harvested Acreage	1,000	IOWA	ILL.	N. DAK.	KANSAS	MINN.	NEBR.	35	
Principal Crops, 1898 2/	Acres	24,097	22,977	20,660	18,795	18,661	17,641	983	305,641
All Wheat Prod.	1,000	N. DAK.	KANSAS	OKLA.	MONT.	WASH.	ILL.	33	
1989.....	Bushels	242,320	213,600	153,900	145,030	110,610	105,020	5,950	2,035,818
Other Spring Wheat	1,000	N. DAK.	MINN.	MONT.	S. DAK.	WASH.	IDAHO	9	
Prod. 1989.....	Bushels	174,000	96,900	85,000	45,100	41,710	34,720	990	489,747
Winter Wheat	1,000	KANSAS	OKLA.	ILL.	MO.	WASH.	OHIO	31	
Prod. 1989.....	Bushels	213,600	153,900	105,020	86,950	68,900	62,730	4,960	1,453,842
Barley Prod.	1,000	N. DAK.	MONT.	IDAHO	MINN.	WASH.	S. DAK.	10	
1989.....	Bushels	98,050	68,800	59,500	44,000	28,420	19,250	9,006	403,443
Oats Prod.	1,000	IOWA	WIS.	MINN.	S. DAK.	N. DAK.	MICH.	31	
1989.....	Bushels	54,000	46,860	46,750	44,000	20,150	20,100	1,258	373,778
Field Corn for	1,000	IOWA	ILL.	NEBR.	MINN.	IND.	OHIO	39	
Grain Prod., 1989.....	Bushels	1,443,500	1,322,250	852,000	700,000	691,600	342,200	2,640	7,527,152
Corn Silage Prod.,	1,000	WIS.	N.Y.	PA.	MINN.	IOWA	CALIF.	27	
1989.....	Tons	9,932	7,150	6,000	5,460	4,590	4,536	836	86,243
All Potato Prod.,	1,000	IDAHO	WASH.	WIS.	OREG.	COLO.	MAINE	23	
1989.....	Cwt.	102,475	64,310	25,460	23,308	22,587	22,000	1,495	370,344
All Dry Bean	1,000	MICH.	NEBR.	IDAHO	CALIF.	COLO.	N. DAK.	14	
Prod. 1989.....	Cwt.	4,500	3,494	3,444	3,436	3,108	2,460	15	24,333
Alfalfa Hay	1,000	WIS.	CALIF.	IOWA	MICH.	MINN.	NEBR.	17	
Prod., 1989.....	Tons	7,130	6,834	5,700	4,680	4,420	3,900	1,739	77,208
All Hay Prod.,	1,000	TEXAS	CALIF.	WIS.	MO.	IOWA	MINN.	27	
1989.....	Tons	9,582	8,524	8,080	6,764	6,650	6,400	1,986	145,445

1/ In accordance with ERS Agricultural Resources, Outlook and Situation Summary.

2/ Crop acreages included are corn, sorghum oats, barley, wheat, rice, rye, soybeans, flaxseed, peanuts, sunflowers, popcorn, cotton, all hay, dry edible beans, potatoes, tobacco, sugarcane, and sugarbeets.

Top Six States by Agricultural Category, Utah's Rank and United States Total

Category	Unit	First	Second	Third	Fourth	Fifth	Sixth	Utah's Rank	United States Total
FRUITS & VEGETABLES									
Apples Utilized Prod.		WASH.	MICH.	N.Y.	CALIF.	PA.	VA.	18	
All Commercial, 1989.....	Lbs.	5,000,000	1,000,000	960,000	650,000	340,000	338,000	54,000	9,945,800
Apricot Utilized Prod.		CALIF.	WASH.	UTAH				3	
1989.....	Tons	111,000	1,600	350				350	112,950
Sweet Cherry Utilized Prod.		WASH.	OREG.	CALIF.	MICH.	IDAHO	UTAH	6	
1989.....	Tons	84,000	51,000	26,000	25,000	2,500	1,600	1,600	191,930
Tart Cherry Utilized Prod.	Mil.	MICH.	UTAH	N.Y.	OREG.	WIS.	PA.	2	
1989.....	Lbs.	170.0	22.5	22.5	15.0	7.5	5.7	22.5	243.6
Pear Utilized Prod.		WASH.	CALIF.	OREG.	N.Y.	MICH.	PA.	8	
1989.....	Tons	344,000	316,000	211,000	16,300	8,000	5,400	2,600	908,700
Peach Utilized Prod.	1,000	CALIF.	S.C.	GEORG.	N.J.	PA.	MICH.	16	
Freestone 1989.....	Lbs.	524,000	235,000	115,000	65,000	65,000	55,000	10,500	2,210,400
Summer Storage	1,000	OREG.	COLO.	IDAHO	N.Y.	MICH.	WASH.	7	
Onion Prod. 1989.....	Cwt.	6,563	5,520	3,885	2,912	2,212	2,142	748	24,809
LIVESTOCK, MINK AND POULTRY									
All Cattle & Calves	1,000	TEXAS	NEBR.	KANSAS	OKLA.	CALIF.	IOWA	36	
Jan. 1, 1990.....	Head	13,400	5,800	5,700	5,300	4,900	4,700	800	99,337
Beef Cows	1,000	TEXAS	MO.	OKLA.	NEBR.	S. DAK.	KANSAS	31	
Jan. 1, 1990.....	Head	5,310	1,979	1,900	1,755	1,505	1,390	333	33,705
Commercial Cattle	1,000	KANSAS	TEXAS	NEBR.	COLO.	IOWA	ILL.	14	
Slaughter, 1989.....	Head	6,219	5,859	5,813	2,183	1,863	1,239	491	33,917
All Hogs & Pigs	1,000	IOWA	ILL.	MINN.	IND.	NEBR.	MO.	41	
Dec. 1, 1990.....	Head	13,500	5,700	4,450	4,350	4,200	2,700	27	53,852
Commercial Hog	1,000	IOWA	ILL.	MINN.	NEBR.	MICH.	VA.	22	
Slaughter, 1989.....	Head	25,586	8,555	5,194	5,164	4,875	4,460	271	88,692
Honey Production	1,000	CALIF.	N. DAK.	MINN.	FLA.	S. DAK.	NEBR.	22	
1989.....	Lbs.	18,190	16,240	14,260	13,865	11,270	7,378	1,892	169,274
Mink Pelts Prod.		WIS.	UTAH	MINN.	IDAHO	OREG.	WASH.	2	
1988.....	Pelts	1,121,500	770,000	536,000	262,000	255,000	244,000	770,000	4,453,100
Stock Sheep & Lambs	1,000	TEXAS	CALIF.	WYO.	MONT.	S. DAK.	UTAH	6	
Inv. Jan. 1, 1990.....	Head	1,890	775	740	640	535	485	485	9,651
Turkeys Raised	1,000	N.C.	MINN.	CALIF.	ARK.	MO.	VA.	NA	
1989.....	Head	52,200	43,100	29,000	19,800	17,300	16,600	3,590	260,300
Egg Prod.		CALIF.	IND.	PA.	OHIO	GEOR.	ARK.	29	
1989.....	Mil.	7,317	5,529	5,232	4,353	4,233	3,352	460	67,100
Milk Prod.	Mil.	WIS.	CALIF.	N.Y.	MINN.	PA.	MINN.	31	
1989.....	Pounds	24,000	19,353	11,142	10,108	9,998	5,152	1,170	144,252
American Cheese	1,000	WIS.	MINN.	CALIF.	IOWA	IDAHO	N.Y.	10	
Prod. 1989.....	Pounds	924,206	561,856	244,849	126,037	104,774	83,678	37,716	2,672,575
Trout Prod.	1,000	IDAHO	CALIF.	N.C.	UTAH	PA.	WASH.	4	
1989.....	Dollars	28,766	8,848	8,685	4,731	4,333	4,230	4,731	72,634

NA = Not available.

Crops: Record Highs and Lows for Acreage, Yield, and Production of Utah Crops

Item	Unit	Record High		Record Low		Year Record Started
		Quantity	Year	Quantity	Year	
CORN FOR GRAIN						
Acres harvested	Thou. acres	22	1988	2	1963 & 66	1919
Yield	Bushels	140.0	1987	17.0	1934	
Production	Thou. bu.	2,800	1987	85	1934	
CORN FOR SILAGE						
Acres harvested	Thou. acres	80	1975 & 76	2	1920 - 22	1919
Yield	Tons	21.0	1987	6.0	1934	
Production	Thou. tons	1,501	1980	17	1921	
OATS						
Acres harvested	Thou. acres	82	1910	10	1977	1882
Yield	Bushels	74.0	1989	25.0	1882 & 83	
Production	Thou. bu.	3,338	1914	550	1977	
BARLEY						
Acres harvested	Thou. acres	190	1957	8	1898	1882
Yield	Bushels	83	1987	22.0	1882	
Production	Thou. bu.	12,880	1982	242	1882	
ALL WHEAT						
Acres harvested	Thou. acres	444	1953	65	1880 & 81	1879
Yield	Bushels	45.0	1987	15.4	1919	
Production	Thou. bu.	9,750	1986	1,139	1882	
WINTER WHEAT						
Acres harvested	Thou. acres	342	1953	120	1909	1909
Yield	Bushels	43.0	1987	12.7	1919	
Production	Thou. bu.	8,100	1986	1,862	1924	
SPRING WHEAT						
Acres harvested	Thou. acres	160	1918	16	1972	1909
Yield	Bushels	57.0	1987	18.7	1919	
Production	Thou. bu.	4,000	1918	704	1972	
ALL HAY						
Acres harvested	Thou. acres	686	1930	402	1909	1909
Yield	Tons	3.61	1981	1.51	1934	
Production	Thou. tons	2,324	1987	679	1934	
ALFALFA HAY						
Acres harvested	Thou. acres	562	1930	359	1934	1922
Yield	Tons	4.10	1981 & 87	1.67	1934	
Production	Thou. tons	1,988	1987	600	1934	
OTHER HAY						
Acres harvested	Thou. acres	180	1947	92	1934	1924
Yield	Tons	2.1	1987	.86	1934	
Utilized prod.	Thou. tons	336	1987	79	1934	
DRY EDIBLE BEANS						
Acres harvested	Thou. acres	20	1970	1	1934-35 & 77	1934
Yield cleaned	Pounds	800	1957	200	1956,59,62,77	1954
Production cleaned	Thou. cwt.	91	1947	2	1977	1934
FALL POTATOES						
Acres harvested	Thou. acres	19.6	1943	4.3	1972	1882
Yield	Hundredweight	275	1986	45	1886	
Production	Thou. cwt.	2,153	1946	405	1886	
SUMMER STORAGE ONIONS						
Acres harvested	Acres	2,400	1944	550	1954 & 66	1939
Yield	Hundredweight	485	1987	200	1940	
Production	Thou. cwt.	830	1979	150	1952	
APRICOTS						
Utilized Prod.	Tons	10,000	1957	0	1972	1929
SWEET CHERRIES						
Utilized Prod.	Tons	7,700	1968	0	1972	1938
PEARS						
Utilized Prod.	Tons	8,750	1954	200	1972	1909
APPLES						
Utilized Prod.	Mil. Pounds	68.0	1987	2.7	1889	1889
TART CHERRIES						
Utilized Prod.	Mil. Pounds	23.0	1983	1.3	1972	1938
PEACHES (Freestone)						
Utilized Prod.	Mil. Pounds	44.2	1922	1.5	1972	1899

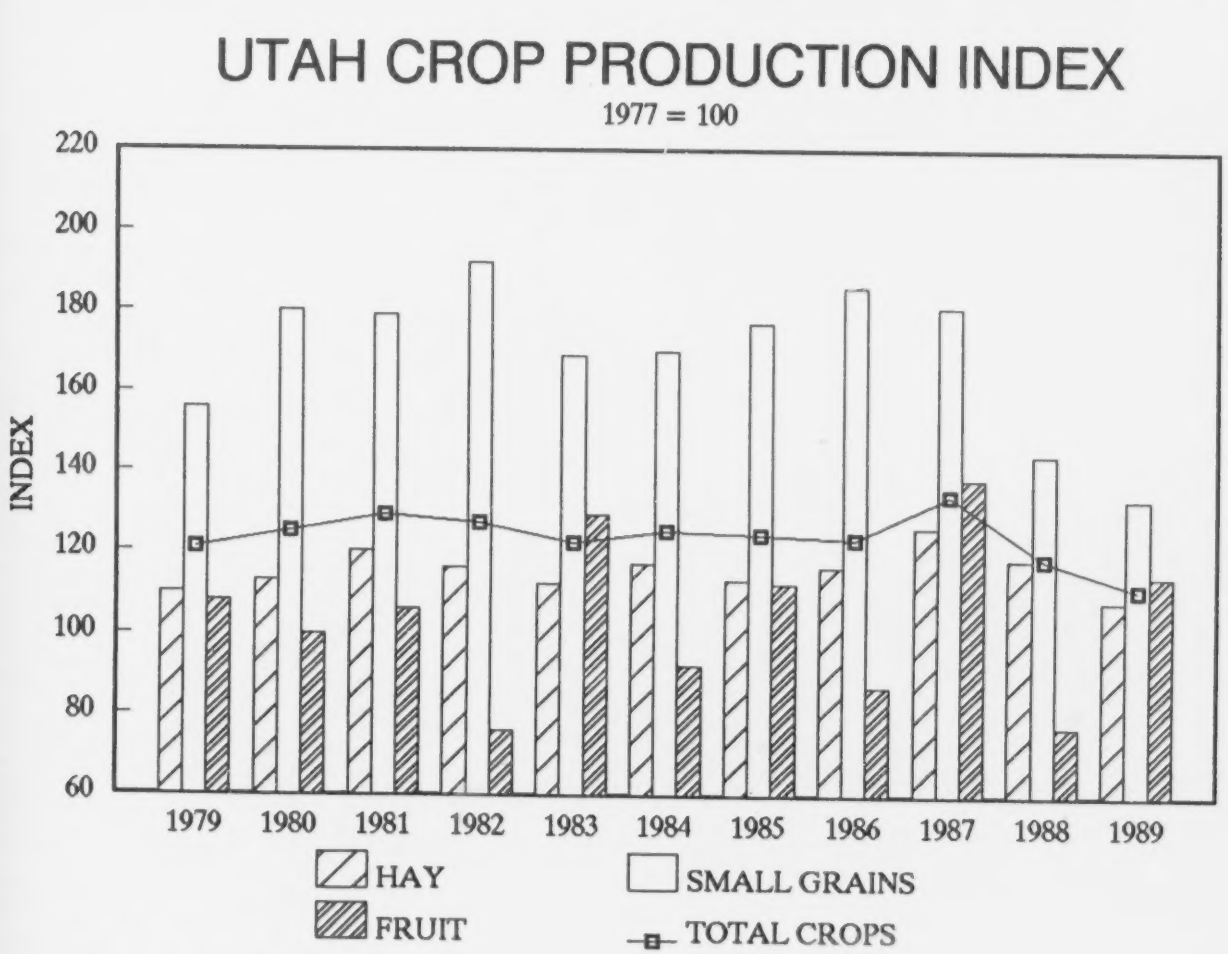
Utah Livestock, Poultry, Mink and Honey: Record High and Low Numbers

Item	Unit	Record High		Record Low		Year Record Started
		Quantity	Year	Quantity	Year	
Cattle and Calves						
Inventory January 1	Thou. hd.	950	1983	95	1867	1867
Calves born	Thou. hd.	390	1975	129	1935	1920
Beef cows Jan. 1 1/	Thou. hd.	374	1983	107	1939	1920
Milk cows Jan. 1 1/	Thou. hd.	126	1945	14	1867	1867
Milk production	Mil. lbs.	1,171	1983	412	1924	1924
Cattle on Feed Jan. 1	Thou. hd.	81	1963 & 66	33	1986	1959
Hogs and Pigs						
Inventory Dec. 1 2/	Thou. hd.	196	1944	4	1867-69	1867
Sheep and Lambs						
Stock sheep Inv. Jan 1	Thou. hd.	2,935	1931	167	1867	1867
Lamb crop	Thou. hd.	1,736	1930	380	1987-88	1924
Sheep & lambs on feed	Thou. hd.	295	1937	18	1988	1920
Chickens						
Hens and pullets of laying age Dec. 1	Thou. hd.	2,750	1944	1,166	1965	1925
Egg production total for year	Mil. eggs	496	1987	142	1924	1924
Turkeys						
Raised	Thou. hd.	4,061	1973	215	1935	1929
Honey						
Production	Thou. lbs.	4,368	1963	848	1946	1913
Mink						
Pelts produced	Thousand	770.0	1988	283.0	1973	1969

1/ Cows and heifers two years old and over prior to 1970, cows that have calved starting in 1970. 2/ January 1 estimates discontinued in 1969. December 1 estimates started 1969.

Utah Crop Production Index (1977 = 100).

Year	Commodity				
	Small Grain	Hay	Fruit	Other Crops	Total Crops
	- - - - - - - - - - - - - - Percent - - - - - - - - - - - - - -				
1979.....	156	110	108	135	121
1980.....	180	113	100	132	125
1981.....	179	120	106	130	129
1982.....	192	116	76	134	127
1983.....	169	112	129	116	122
1984.....	170	117	92	129	125
1985.....	177	113	112	124	124
1986.....	186	116	87	112	123
1987.....	181	126	137	120	134
1988.....	144	118	77	113	118
1989.....	133	108	114	104	111



Number of Farms

The number of farms in Utah in 1989 is estimated at 13,000, down 2 percent from 13,300 in 1988. Total land in farms for 1989 is 11.3 million acres, unchanged from last year. The average size of farms in Utah followed national trends of increased size, moving from 850 to 869 acres. This is the second consecutive year that average farm size has increased following 11 years of decreasing size in the Beehive State.

Nationally, farm numbers for 1989 are forecast at 2.17 million, down one percent from 1988. Total land in farms for the United States is 991 million acres, down fractionally from 1988. Since the number of farms has declined at a faster rate than land in farms, the average size of farms has increased from 453 to 456 acres in 1989. This marks the 8th consecutive year that average farm size has increased at the national level.

Number of Farms and Land in Farms, Selected Years 1/.

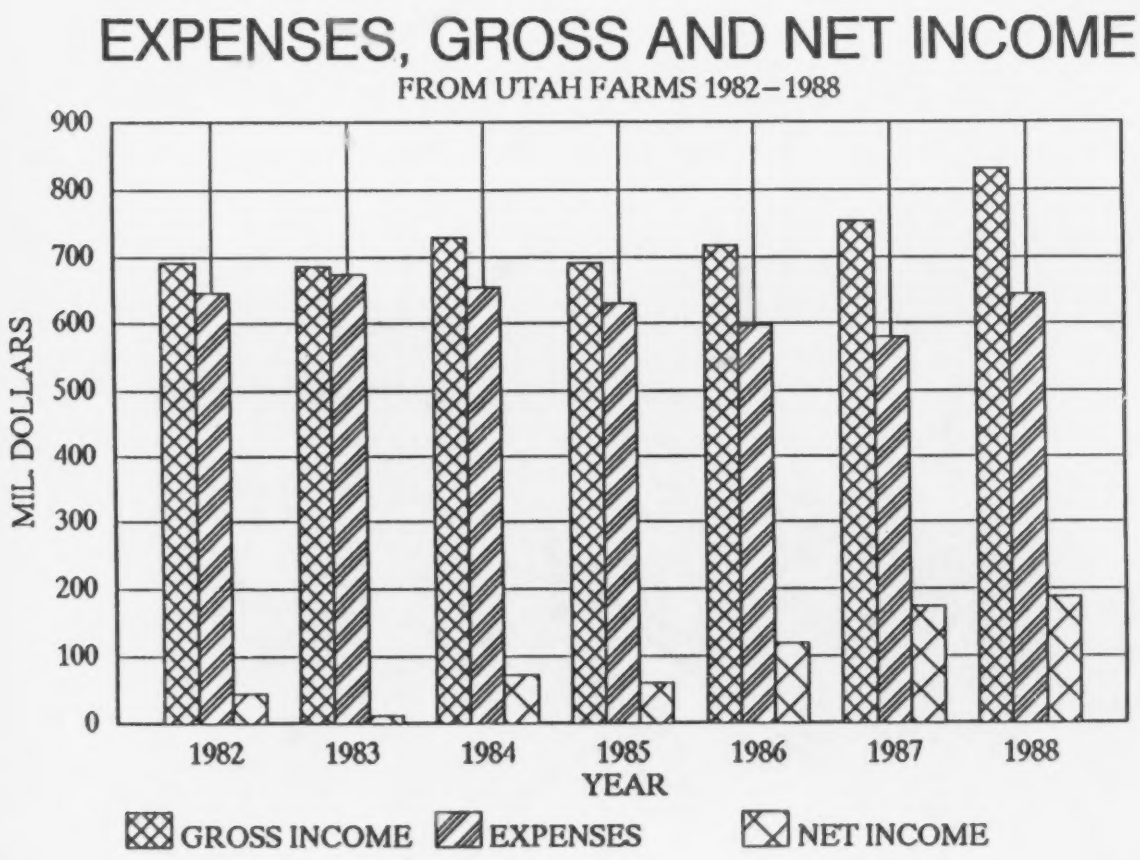
Year	UTAH			UNITED STATES		
	Farms	Land in Farms		Farms	Land in Farms	
		Average	Total		Average	Total
			1,000			1,000,000
	Number	Acres	Acres	1,000	Acres	Acres
1850.....	926	51	47	1,449	203	294
1860.....	3,635	25	90	2,044	199	407
1880.....	9,452	69	656	4,009	134	536
1900.....	19,387	212	4,117	5,737	146	839
1920.....	25,662	197	5,050	6,448	148	956
1930.....	27,159	207	5,613	6,289	157	987
1940.....	28,500	354	10,100	6,097	174	1,061
1950.....	25,800	465	12,000	5,382	215	1,159
1960.....	19,000	716	13,600	3,963	297	1,176
1965.....	16,500	818	13,500	3,356	340	1,140
1970.....	14,100	936	13,200	2,949	374	1,102
1975 2/.....	12,600	1,000	12,600	2,521	420	1,059
1977.....	12,800	984	12,600	2,456	427	1,048
1978.....	12,900	977	12,600	2,436	429	1,045
1979.....	13,200	939	12,400	2,437	428	1,042
1980.....	13,500	919	12,400	2,440	426	1,039
1981.....	13,800	884	12,200	2,440	424	1,034
1982.....	14,000	864	12,100	2,407	427	1,028
1983.....	14,000	857	12,000	2,379	430	1,023
1984.....	14,000	843	11,800	2,334	436	1,018
1985.....	13,900	835	11,600	2,293	441	1,012
1986.....	13,700	832	11,400	2,250	447	1,005
1987.....	13,600	831	11,300	2,213	451	999
1988.....	13,300	850	11,300	2,197	453	995
1989 3/.....	13,000	869	11,300	2,173	456	991

1/ 1850-1931 from U.S. Census of Agriculture--1940-89 are USDA estimates.
2/ Starting in 1975, the figures are based on the "new definition" which is a place with annual sales of agricultural products of $1,000 or more. Prior to this definition "a farm" included places of 10 or more acres that had annual sales of agricultural products of $50 or more and places of less than 10 acres that had annual sales of $250 or more. 3/ Preliminary.

Farm Income

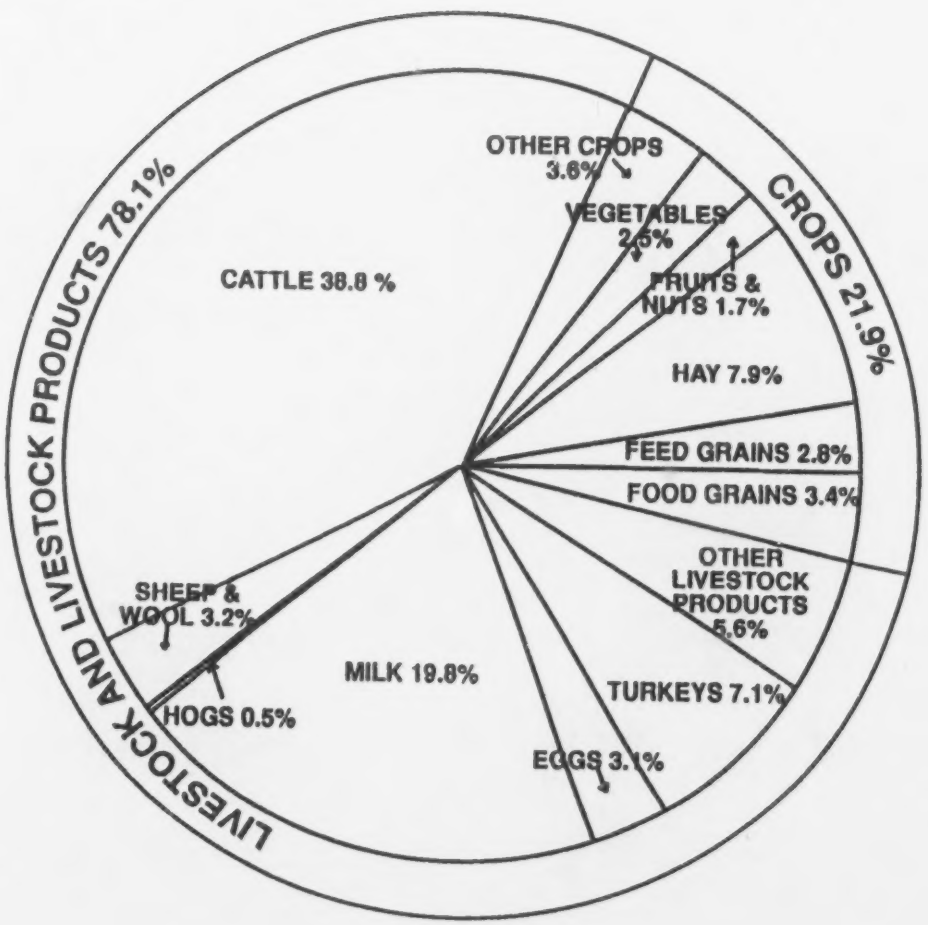
Marketing of Utah crops and livestock in 1989 produced cash receipts totaling $711.0 million, according to preliminary data released by USDA's Economic Research Service. This was 3 percent above the 1988 level, and marks the third consecutive record breaking year. Cash receipts from livestock of $555.3 million were up 3 percent from 1988. Cash receipts from crops, at $155.7 million were also up 3 percent from the previous year.

Gross farm income in Utah during 1988 was $830.9 million, up 10 percent from the record high set in 1987. Net farm income of $186.7 million, compared with $173.5 million in 1987. Total production expenses during 1988 were $644.2 million, 11 percent above those of 1987.



Utah Cash Receipts by Commodities, 1988

The graph below displays the predominance of livestock in Utah's agricultural economy. Livestock accounted for 78.1 percent of farm cash receipts in 1988--up from 77.6 percent in 1987. Cattle was the single largest contributing commodity, producing 38.8 percent of the cash receipts. Milk was second, with 19.8 percent of the receipts; followed by turkeys, with 7.1 percent. Hay remained the largest cash producing crop and was the third highest contributing commodity overall.



Cash Receipts by Commodities, Utah, 1986-89.

Commodity	1986		1987		1988		1/1989	
	1,000 Dollars	Percent	1,000 Dollars	Percent	1,000 Dollars	Percent	1,000 Dollars	Percent
ALL COMMODITIES.....	575,805	100.0	599,556	100.0	687,420	100.0	710,971	100.0
LIVESTOCK PRODUCTS.....	441,980	76.8	465,623	77.7	536,967	78.1	555,321	78.1
Meat Animals.....	204,346	35.5	240,179	40.1	286,260	41.6		
Cattle/Calves.....	177,954	30.9	214,954	35.9	266,665	38.8		
Sheep/Lambs.....	23,400	4.1	21,663	3.6	16,109	2.3		
Hogs.....	2,992	.5	3,562	0.6	3,486	0.5		
Dairy Products.....	137,220	23.8	134,318	22.4	136,397	19.8		
Milk, Wholesale.....	128,620	22.3	124,355	20.7	127,020	18.5		
Milk, Retail.....	8,600	1.5	9,963	1.7	9,377	1.4		
Poultry/Eggs.....	68,772	11.9	56,896	9.5	70,499	10.3		
Turkeys.....	52,328	9.1	37,922	6.3	48,649	7.1		
Eggs.....	15,995	2.8	18,600	3.1	21,363	3.1		
Other Poultry.....	105	*	145	*	200	*		
Misc. Livestock.....	31,642	5.5	34,230	5.7	43,811	6.4		
Wool.....	3,081	.5	4,018	0.7	6,222	0.9		
All Other Livestock...	27,600	4.8	29,300	4.9	36,600	5.3		
CROPS.....	133,825	23.2	133,933	22.3	150,453	21.9	155,650	21.9
Food Grains.....	22,267	3.9	21,076	3.5	23,223	3.4		
Wheat.....	22,267	3.9	21,076	3.5	23,223	3.4		
Feed Crops.....	59,005	10.2	60,663	10.1	73,673	10.7		
Hay.....	42,342	7.4	45,043	7.5	54,645	7.9		
Barley.....	12,980	2.3	11,746	2.0	13,120	1.9		
Corn.....	3,115	.5	3,320	.6	5,150	.7		
Vegetables.....	12,626	2.2	16,257	2.7	17,081	2.5		
Potatoes.....	6,580	1.1	6,679	1.1	6,594	1.0		
Onions.....	3,854	.7	5,966	1.0	7,068	1.0		
Misc. Vegetables.....	1,000	.2	1,700	.3	1,600	.2		
Fruits, Nuts.....	13,304	2.3	10,545	1.8	11,676	1.7		
Apples.....	4,868	.8	4,437	.7	4,655	.7		
Cherries.....	5,042	.9	2,835	.5	3,331	.5		
Peaches.....	1,859	.3	1,520	.3	2,052	.3		
Other Berries.....	350	*	380	.1	280	*		
Misc. Fruits and Nuts.	135	*	125	*	210	*		
All Other Crops.....	26,623	4.6	25,392	4.2	24,800	3.6		
Other Seeds.....	4,000	.7	3,000	.5	2,300	.3		
Other Field Crops.....	665	.1	640	.1	1,000	.1		
Other Ornamentals.....	16,000	2.8	16,000	2.7	16,000	2.3		

1/ Preliminary.

Source: State Income and Balance Sheet Statistics, Economic Research Service, USDA. Note: Data for some items are confidential and are not listed. Also, data for minor commodities are not shown separately. Both classes of items are included in group totals.

*Less than 0.05 percent. Percents may not be accurate to 0.1 in last digit because of method of machine computation.

Commodity groupings may not add because individual commodities with less than $1,000,000 receipts are not published separately or included in "other".

Cash Receipts, Gross and Net Income from Farming, Utah, 1982-89 1/.

Item	1982	1983	1984	1985	1986	1987	1988	1989
	Million Dollars							
GROSS FARM INCOME 2/.....	690.4	685.0	728.1	690.4	717.1	753.8	830.9	
Cash Income.....	553.9	598.0	621.7	586.0	612.9	651.0	732.5	
Marketings Crops & Lvstk	538.8	574.5	587.8	554.9	570.9	599.6	687.4	711.0
Government Payments.....	9.2	18.6	28.0	23.6	36.0	44.5	38.4	
Other Farm Income.....	5.9	5.0	6.0	7.5	6.0	7.0	6.7	
Noncash Income 3/.....	128.8	124.2	127.5	116.0	108.2	102.0	95.9	
Value of Inventory Adj. ...	7.7	-37.3	-21.2	-11.6	-4.1	.7	2.5	
TOTAL PRODUCTION EXPENSES 2/.	644.7	673.0	654.9	629.0	597.6	580.3	644.2	
NET FARM INCOME 4/.....	45.7	11.9	73.2	61.3	119.4	173.5	186.7	
Cash Income 5/.....	553.9	598.0	621.7	586.0	612.9	651.0	732.5	
Cash Expenses 5/.....	481.9	509.5	496.9	480.3	463.8	459.9	527.2	
NET CASH INCOME.....	72.0	88.5	124.9	105.7	149.2	191.1	205.2	

1/ Source: Data for 1982-88 from "Economic Indicators of the Farm Sector: State Financial Summary, 1988", Economic Research Service, USDA--1989 data preliminary from "Economic Indicators of the Farm Sector. 2/ Includes operator households. 3/ Includes value of home consumption and rental value of operators' and hired labors' dwellings. 4/ Gross farm income (including value of inventory adjustment) less total production expenses. 5/ Excludes operator households.

Farm Operating Expenses, Utah, 1982-88.

Item	1982	1983	1984	1985	1986	1987	1988
	Million Dollars						
Feed.....	109.1	129.2	113.8	106.4	97.5	102.1	132.3
Livestock.....	29.6	21.2	32.9	28.2	37.5	42.0	72.6
Seed.....	6.4	6.1	7.0	6.8	6.1	6.1	6.4
Fertilizer and Lime.....	10.3	9.9	8.7	8.6	6.4	6.2	7.1
Pesticides.....	5.3	5.1	5.9	6.2	5.6	5.7	5.8
Fuel and Oil.....	35.7	33.9	32.3	29.8	21.7	20.1	20.6
Electricity.....	12.5	13.1	13.3	13.2	11.9	14.7	15.8
Repair and Maintenance.....	37.1	37.5	36.7	38.3	38.7	37.9	38.9
Other Miscellaneous 1/.....	79.0	96.3	91.8	88.7	90.7	83.4	90.4
Interest--Real Estate.....	54.7	58.8	59.9	57.0	52.7	44.3	41.0
Interest--Nonreal Estate.....	55.2	50.5	47.4	46.6	42.2	38.1	34.8
Contract and Hired Labor Expenses...	48.1	46.4	46.2	46.6	47.0	51.3	53.1
Net Rent to Nonoperator Landlords...	4.4	6.3	7.6	6.4	7.4	9.3	10.6
Capital Consumption.....	135.4	136.4	131.0	124.0	110.5	98.1	95.0
Property Taxes.....	21.9	22.2	20.5	22.3	21.9	20.8	19.9
TOTAL PRODUCTION EXPENSES 2/.....	664.7	673.0	654.9	629.0	597.6	580.3	644.2

1/ Includes machine hire and customwork expenses; marketing, storage, and transportation expenses; and miscellaneous expenses. Definitions and data sources for 1978 and later are not directly compatible with those of earlier years. 2/ Includes operator households.

Utah Farm Balance Sheet (Excluding Operator Households), December 31, 1984-88 1/.

Item	1984	1985	1986	1987	1988 2/
			Million Dollars		
Assets					
Total Farm Assets	6,653.6	6,107.5	5,765.6	5,515.5	5,547.5
Real Estate 3/	5,523.1	5,053.1	4,724.6	4,420.4	4,423.7
Livestock and Poultry 4/	356.9	352.2	360.6	466.6	545.2
Machinery and Motor Vehicles 5/	474.7	434.3	399.6	370.7	368.9
Crops 6/	115.6	114.4	95.9	100.7	121.0
Financial Assets	183.4	153.4	184.8	157.2	88.7
Claims					
Total Farm Debt	1,011.4	952.9	823.4	747.8	743.2
Real Estate Debt 7/	588.9	549.0	487.6	438.5	422.1
Nonreal Estate Debt 8/	422.4	403.9	335.8	309.2	321.1
Equity	5,642.2	5,154.6	4,942.2	4,767.8	4,804.3
Ratios			Ratio		
Equity/Assets	84.8	84.4	85.7	86.4	86.6
Debt/Equity	17.9	18.5	16.7	15.7	15.5
Debt/Assets, Total	15.2	15.6	14.3	13.6	13.4
Debt/Assets, Real Estate	10.7	10.9	10.3	9.9	9.5
Debt/Assets, Nonreal Estate	37.4	38.3	32.3	28.2	28.6
Returns to Operator/Total Debt 9/	2.0	1.2	8.2	16.2	19.3

1/ Data are for farms with sales of $1,000 or more annually. 2/ Preliminary. 3/ Excludes value of operator dwellings. 4/ Excludes horses, mules, and broilers. 5/ Includes only farm share value for trucks and autos. 6/ All non-CCC crops held on farms plus the value above loan rate for crops held under CCC. 7/ Excludes debt on operator dwellings, but includes CCC storage and drying facility loans. 8/ Excludes debt for nonfarm purposes. 9/ Total debt in this ratio is an average for the year.

Source: "Economic Indicators of the Farm Sector: State Financial Summary", Economic Research Service, USDA.

Field Crops

Water year accumulation in the northern half of Utah was about normal, and the southern half was about three-fourths of normal at the beginning of the cropping season. This was a contrast to the 1988 season, when the southern district averaged 123 percent normal, and the northern district was about two-thirds of normal. Alfalfa and winter wheat made good early growth, but there was concern about late freeze damage. Plantings and seedings were behind the fast pace of 1988 due to low soil temperature, but near the 5 year average. Irrigation began in the second week of April to assist emergence of corn in several districts, and bring the alfalfa crop to first cutting. Temperatures were above normal in early June, and precipitation was below normal. This situation continued until early September, creating severe drought conditions in southeast and eastern districts. Nonirrigated crops suffered the most in all counties, and shortage of irrigation water cut yields severely in several counties. Water reserves at the end of the cropping year were very low, and soil moisture carryin for next year was below normal.

Hay remains Utah's largest cash crop. While a large part of the crop is fed to Utah's livestock herds, a portion is marketed to neighboring states and overseas as pelleted and baled alfalfa. Alfalfa hay harvested was down 20,000 acres to 470,000 acres. Yields averaged 3.70 tons per acre, compared with 3.90 tons last year. Total production of 1.7 million tons was down 9 percent from 1988. Other hay harvested at 130,000 acres, compared with 140,000 acres harvested in 1988. Average yields of 1.90 tons per acre was the same as last year. Production of 247,000 tons, was down 7 percent from the previous year. The 1989 all hay crop was valued at $165.8 million, which was up $400,000 from 1988.

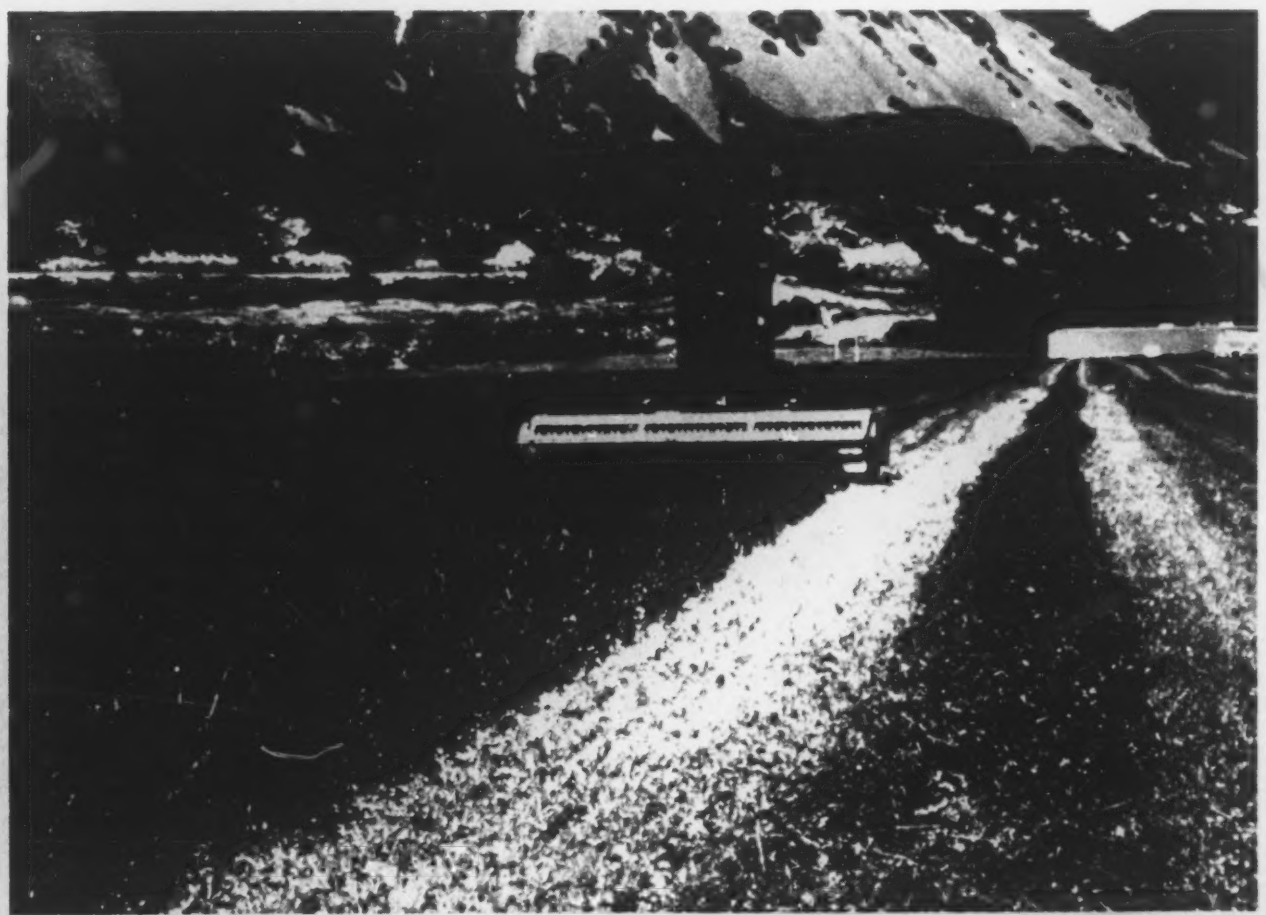
Small grains: Planted acreage for wheat was the same, barley was down 4 percent, but oat planted acreage was up 13 percent. Yields for wheat were lower, but barley and oats were higher. Winter wheat harvested acreage at 155,000, was the same as 1988, and yields were down 4.0 bushels per acre. Total production of 5.0 million bushels was 11 percent below 1988. Value of production dropped 14 percent to $18.0 million. Spring wheat harvested acres of 22,000 were the same as 1988. Yield of 45 bushels per acre, compared with 1988's yield of 54 bushels, and the record high of 57 bushels in 1987. Production of 990,000 bushels is down from the previous year's 1.2 million. Value of production of $3.6 million was down 18 percent from 1988. Barley acreage harvested at 114,000 was 11,000 acres below 1988. Production of 9.0 million bushels was down 6 percent, even though average yield of 79 bushel per acre was 2 bushels above the previous year. Value of production at $19.4 million was down 24 percent from 1988. Oat production at 1.3 million bushel, was up 25 percent from 1988, and the largest production since 1958. Yield, at 74 bushels per acre, was up 2.0 bushels from 1988 for a new record high. Growers harvested 17,000 acres for grain, up 21 percent from last year. The value of production was down 17 percent to $2.1 million.

Corn acreage planted for all purposes at 65,000 acres, was down 7 percent from 1988. Acreage harvested for grain at 20,000, compared with 22,000 acres a year ago. Yields were up 8 bushels per acre from 1988. Total grain production of 2.6 million bushels, was 3 percent below 1988. The crop was valued at $7.1 million, down 17 percent from last year. Total corn silage production from 44,000 acres at 836,000 tons, compared with 940,000 tons in 1988. The value of the crop was $20.1 million, compared with $21.6 million in 1988.

Utah Usual Planting and Harvesting Dates, by Crop and Principal Producing Areas

Crop	1989 Harvested Acreage (000)	Usual Planting Dates	Usual Harvesting Dates			Principal Producing Areas and Counties
			Begins	Most Active	Ends	
Barley:						
Spring 1/	114	Mar 20 - Apr 25	Jul 20	Jul 25 - Aug 15	Sep 1	Statewide
Beans:						
Dry 1/	5.0	May 10 - Jun 1	Sep 1	Sep 10 - Sep 30	Oct 20	San Juan
Corn:						
Grain 1/	20	Apr 25 - Jun 5	Sep 10	Sep 25 - Oct 20	Dec 10	Utah, Box Elder
Silage 1/	44	May 1 - Jun 5	Sep 5	Sep 10 - Sep 25	Oct 10	Statewide
Hay:						
Alfalfa 1/	470		Jun 1		Oct 25	Statewide
Other 1/	130		Jul 10		Aug 25	Statewide
Oats:						
Spring 1/	17	Mar 20 - May 15	Jul 20	Jul 25 - Aug 10	Aug 25	Statewide
Onions, Summer						Davis, Weber, Salt
Storage 2/	1.7	Mar 1 - Apr 30	Sep 20	Sep 25 - Oct 20	Oct 31	Lake, Utah, Box Elder
Potatoes:						
Fall 3/	6.1	Apr 20 - Jun 15	Jul 15	Sep 15 - Oct 25	Nov 5	Statewide
Wheat:						Millard, San Juan
Winter 1/	155	Aug 25 - Oct 20	Jul 5	Jul 15 - Aug 5	Aug 20	Box Elder, Cache
Spring 1/	22	Mar 20 - May 1	Aug 1	Aug 5 - Aug 25	Sep 1	Salt Lake, Utah, Juab

1/ USDA Agriculture Handbook 628, Apr. 1984. 2/ USDA Agriculture Handbook 507, Feb. 1977, 3/ USDA Handbook 460, Dec. 1973.



Corn Planted and Harvested for Silage: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Planted for All Purposes	Acres Harvested	Yield Per Acre	Production	Marketing Year Average Price	Value of Production
	- - 1,000 Acres - -		Tons	1,000 Tons	Dollars per Ton	1,000 Dollars
1940.....	29	10	9.4	94	--	--
1950.....	31	21	11.0	231	7.50	1,732
1960.....	49	41	14.5	594	8.00	4,752
1970.....	63	49	18.0	882	9.80	8,644
1980.....	100	79	19.0	1,501	21.10	31,671
1983.....	80	61	20.0	1,220	23.00	28,060
1984.....	82	62	20.5	1,271	23.00	29,233
1985.....	80	61	20.0	1,220	21.50	26,230
1986.....	72	52	19.5	1,014	20.00	20,280
1987.....	70	47	21.0	987	22.00	21,714
1988.....	70	47	20.0	940	23.00	21,620
1989.....	65	44	19.0	836	24.00	20,064

Corn Planted and Harvested for Grain: Acreage Harvested, Yield, Production, Sales, and Value, Utah, Selected Years.

Year	Planted for All Purposes	Acres Harvested	Yield Per Acre	Production	Marketing Year Average Price	Value of Production
	- - 1,000 Acres - -		Bushel	1,000 Bushels	Dollars per Bu.	1,000 Dollars
1940.....	29	10	29.0	290	--	--
1950.....	31	5	50.0	250	--	--
1960.....	49	3	64.0	192	1.50	288
1970.....	63	10	90.0	900	1.40	1,260
1980.....	100	15	100.0	1,500	3.75	5,625
1983.....	80	14	110.0	1,540	3.71	5,713
1984.....	82	16	118.0	1,888	3.15	5,947
1985.....	80	16	115.0	1,840	2.80	5,152
1986.....	72	18	125.0	2,250	2.16	4,860
1987.....	70	20	140.0	2,800	2.40	6,720
1988.....	70	22	124.0	2,728	3.15	8,593
1989.....	65	20	132.0	2,640	2.75	7,260

Winter Wheat: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres		Yield per Acre	Production	Marketing Year Average Price 1/	Value of Production
	Planted	Harvested				
	- - 1,000 Acres - -		Bushel	1,000 Bushel	Dollars per Bu.	1,000 Dollars
1940.....	191	180	19.0	3,420	.63	2,155
1950.....	344	326	16.0	5,216	1.86	9,702
1960.....	193	181	18.5	3,348	1.71	5,725
1970.....	200	191	27.0	5,157	1.41	7,271
1980.....	260	242	31.0	7,502	3.95	29,633
1983.....	220	190	35.0	6,650	3.28	21,812
1984.....	230	195	33.0	6,435	3.35	21,557
1985.....	230	220	32.0	7,040	3.00	21,120
1986.....	235	225	36.0	8,100	2.42	19,602
1987.....	180	170	43.0	7,310	2.50	18,275
1988.....	160	155	36.0	5,580	3.84	21,427
1989.....	165	155	32.0	4,960	3.75	18,600

1/ Prior to 1979 includes adjustment for outstanding loans and government purchases. Starting 1979 excludes adjustment for outstanding loans and government purchases.

Spring Wheat: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres		Yield per Acre	Production	Marketing Year Average Price 1/	Value of Production
	Planted	Harvested				
	- - 1,000 Acres - -		Bushel	1,000 Bushel	Dollars per Bu.	1,000 Dollars
1940.....	68	66	31.0	2,046	.65	1,330
1950.....	84	82	32.0	2,624	1.86	4,881
1960.....	52	48	40.5	1,944	1.61	3,130
1970.....	23	21	44.0	924	1.36	1,257
1980.....	32	30	48.0	1,440	3.80	5,472
1983.....	30	27	51.0	1,377	3.43	4,723
1984.....	39	36	45.0	1,620	3.52	5,702
1985.....	44	40	40.0	1,600	3.05	4,880
1986.....	35	33	50.0	1,650	2.48	4,092
1987.....	32	29	57.0	1,653	2.55	4,215
1988.....	24	22	54.0	1,188	3.71	4,407
1989.....	25	22	45.0	990	3.70	3,663

1/ Prior to 1979 includes adjustment for outstanding loans and government purchases. Starting 1979 excludes adjustment for outstanding loans and government purchases.

All Wheat: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres		Yield per Acre	Production	Marketing Year Average Price 1/	Value of Production
	Planted	Harvested				
	- - 1,000 Acres - -		Bushel	1,000 Bushel	Dollars per Bu.	1,000 Dollars
1940.....	259	246	22.2	5,466	.64	3,485
1950.....	428	408	19.2	7,840	1.86	14,583
1960.....	245	229	23.1	5,292	1.67	8,855
1970.....	223	212	28.7	6,081	1.40	8,528
1980.....	292	272	32.9	8,942	3.93	35,105
1983.....	250	217	37.0	8,027	3.31	26,535
1984.....	269	231	34.9	8,055	3.38	27,259
1985.....	274	260	33.2	8,640	3.01	26,000
1986.....	270	258	37.8	9,750	2.43	23,694
1987.....	212	199	45.0	8,963	2.51	22,490
1988.....	184	177	38.2	6,768	3.82	25,834
1989.....	190	177	33.6	5,950	3.74	22,263

1/ Prior to 1979 includes adjustment for outstanding loans and government purchases. Starting 1979 excludes adjustment for outstanding loans and goverment purchases.

Barley: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres		Yield per Acre	Production	Marketing Year Average Price 1/	Value of Production
	Planted	Harvested				
	- - - 1,000 Acres - - -		Bushel	1,000 Bushel	Dollars per Bu.	1,000 Dollars
1940.....	109	107	41.0	4,387	.46	2,018
1950.....	146	141	44.0	6,204	1.16	7,197
1960.....	160	147	43.5	6,394	1.00	6,394
1970.....	148	141	58.5	8,249	1.07	8,826
1980.....	162	148	79.0	11,692	2.88	31,116
1983.....	160	154	74.0	11,396	2.80	31,909
1984.....	170	159	73.0	11,607	2.50	29,018
1985.....	172	159	74.0	11,766	2.28	26,826
1986.....	165	152	76.0	11,552	1.85	21,371
1987.....	152	142	83.0	11,786	1.84	21,686
1988.....	139	125	77.0	9,625	2.64	25,410
1989.....	134	114	79.0	9,006	2.20	19,813

1/ Prior to 1979 includes adjustment for outstanding loans and government purchases. Starting 1979 excludes adjustments for outstanding loans and government purchases.

Oats: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres		Yield per Acre	Production	Marketing Year Average Price 1/	Value of Production
	Planted	Harvested				
	- - 1,000 Acres - -		Bushel	1,000 Bushel	Dollars per Bu.	1,000 Dollars
1940.....	46	39	39.0	1,521	.34	517
1950.....	56	51	45.0	2,295	.89	2,043
1960.....	29	23	46.0	1,058	.83	878
1970.....	24	17	60.0	1,020	.76	775
1980.....	26	15	61.0	915	1.95	1,784
1983.....	26	14	68.0	952	1.97	1,875
1984.....	26	13	67.0	871	1.92	1,672
1985.....	26	13	71.0	923	1.65	1,523
1986.....	27	12	72.0	864	1.55	1,339
1987.....	28	14	69.0	966	1.70	1,642
1988.....	32	14	72.0	1,008	2.56	2,580
1989.....	36	17	74.0	1,258	1.70	2,139

1/ Prior to 1979 includes adjustment for outstanding loans and government purchases. Starting 1979 excludes adjustment for outstanding loans and government purchases.

Dry Beans: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres		Yield per Acre	Production	Marketing Year Average Price	Value of Production
	Planted	Harvested				
	- - 1,000 Acres - -		Pounds	1,000 Cwt.	Dollars per Cwt.	1,000 Dollars
1940.....	9	9	500	40	3.55	142
1950.....	12	11	280	27	6.40	173
1960.....	8	6	300	18	7.10	128
1970.....	20	20	430	86	7.90	679
1980.....	12	11	380	42	28.00	1,176
1983.....	7	6.9	600	41	22.00	902
1984.....	9.5	9.3	580	54	16.50	891
1985.....	8.5	8.4	480	40	18.00	720
1986.....	9.0	8.5	480	41	15.00	615
1987.....	6.8	6.7	700	47	15.30	719
1988.....	4.5	4.5	580	26	33.20	863
1989.....	5.6	5.0	300	15	33.30	500

Potatoes: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres		Yield per Acre	Production	Marketing Year Average Price	Value of Production
	Planted	Harvested		1,000 Cwt.	Dollars per Cwt.	1,000 Dollars
	- - - 1,000 Acres - - -					
1940.....	13.0	12.9	102	1,316	.70	921
1950.....	13.5	13.0	147	1,911	1.75	3,344
1960.....	8.3	7.9	170	1,343	2.28	3,062
1970.....	6.0	5.9	170	1,003	2.38	2,387
1980.....	5.3	5.2	225	1,170	5.15	6,026
1983.....	6.0	5.9	230	1,357	4.70	6,378
1984.....	6.5	6.4	270	1,728	5.05	8,726
1985.....	6.6	6.5	255	1,658	4.50	7,461
1986.....	6.4	6.4	275	1,760	4.45	7,832
1987.....	6.6	6.6	240	1,584	4.50	7,128
1988.....	6.8	6.6	245	1,617	5.20	8,408
1989.....	6.3	6.1	245	1,495	5.90	8,821

Potatoes: Production, Farm Use, Sales, and Value, Utah, Selected Years.

Year	Production	Total Used for Seed 1/	Farm Disposition			Price per Cwt.	Value of Sales
			Used on Farms Where Grown		Sold		
			For Seed, Feed, and Household Use	Shrinkage, and Loss			
	- - - - - - - - - - - - 1,000 Cwt. - - - - - - - - - - - -					Dollars	1,000 Dollars
1940.....	1,316	--	--	--	915	.70	640
1950.....	1,911	--	--	--	1,540	1.75	2,695
1960.....	1,343	118	119	117	1,107	2.28	2,524
1970.....	1,003	81	49	90	864	2.38	2,056
1980.....	1,170	149	31	119	1,020	5.15	5,253
1983.....	1,357	156	28	85	1,244	4.70	5,847
1984.....	1,728	158	17	104	1,607	5.05	8,115
1985.....	1,658	154	71	171	1,416	4.50	6,372
1986.....	1,760	158	14	215	1,531	4.45	6,813
1987.....	1,584	156	22	111	1,451	4.50	6,530
1988 2/.....	1,617	121	30	81	1,506	5.20	7,831
1989 3/.....	1,495						

1/ Includes seed purchased and seed used on farms where grown. 2/ Preliminary. 3/ Available September 26, 1990.

All Hay: Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acres Harvested	Yield per Acre	Production	Marketing Year Average Price	Value of Production
	1,000 Acres	Tons	1,000 Tons	Dollars per Ton	1,000 Dollars
1940	553	1.92	1,059	10.50	11,120
1950	534	1.91	1,020	22.20	22,644
1960	566	2.26	1,281	26.40	33,818
1970	563	2.91	1,638	25.00	40,950
1980	605	3.43	2,076	70.00	144,060
1982	608	3.52	2,142	66.00	141,372
1983	595	3.45	2,055	77.00	158,235
1984	610	3.54	2,160	70.50	152,280
1985	605	3.44	2,084	67.00	139,628
1986	625	3.42	2,135	62.50	133,438
1987	645	3.60	2,324	67.00	155,708
1988	630	3.46	2,177	76.00	165,452
1989	600	3.31	1,986	82.50	163,845

Hay Crops: Acreage, Yield, Production, Utah, Selected Years.

Year	Acres Harvested	Yield per Acre	Production	Year	Acres Harvested	Yield per Acre	Production
	1,000 Acres	Tons	1,000 Tons		1,000 Acres	Tons	1,000 Tons
		Alfalfa Hay				All Other Hay 1/	
1940	431	2.10	905	1940	122	1.26	154
1950	361	2.20	794	1950	173	1.31	226
1960	439	2.55	1,119	1960	127	1.28	162
1970	441	3.25	1,433	1970	122	1.68	205
1980	470	3.90	1,833	1980	135	1.80	243
1982	470	4.00	1,880	1982	138	1.90	262
1983	455	3.90	1,775	1983	140	2.00	280
1984	470	4.00	1,880	1984	140	2.00	280
1985	460	3.90	1,794	1985	145	2.00	290
1986	470	3.90	1,833	1986	155	1.95	302
1987	485	4.10	1,988	1987	160	2.10	336
1988	490	3.90	1,911	1988	140	1.90	266
1989	470	3.70	1,739	1989	130	1.90	247

1/ Includes clover-timothy hay, grain hay, other tame hay and wild hay for which separate estimates were discontinued in 1971.

Grain Stocks - Wheat, Barley, Oats, and Corn - Stored Off Farm 1/, by Quarters; Utah, Selected Years.

Year Beginning	Sep. 1	Oct. 1	Dec. 1	Following Year				
				Jan. 1	Mar. 1	Apr. 1	Jun. 1	Jul. 1
				1,000 Bushels				
WHEAT								
1960.....	--	7,116	--	5,867	--	4,369	--	2,105
1970.....	--	5,424	--	5,323	--	4,252	--	2,264
1980.....	--	7,527	--	5,898	--	4,748	3,881	--
1985.....	--	8,541	--	6,956	--	4,446	3,215	--
1986.....	7,498	--	9,440	--	9,800	--	5,906	--
1987.....	9,242	--	8,888	--	8,386	--	5,569	--
1988.....	5,995	--	6,373	--	4,967	--	3,523	
1989.....	4,807	--	4,926	--	5,736	--	2/	--
BARLEY								
1960.....	--	1,653	--	1,087	--	848	--	477
1970.....	--	3,990	--	3,110	--	1,364	--	755
1980.....	--	5,563	--	3,356	--	1,585	856	--
1985.....	--	4,696	--	3,355	--	--	1,120	--
1986.....	NA	--	NA	--	NA	--	1,320	--
1987.....	NA	--	NA	--	NA	--	1,210	--
1988.....	3,117	--	3,376	--	2,086	--	950	--
1989.....	3,535	--	2,477	--	1,565	--	2/	--
OATS								
1985.....	--	164	--	445	--	--	47	--
1986.....	NA	--	NA	--	NA	--	114	--
1987.....	NA	--	NA	--	NA	--	371	--
1988.....	NA	--	NA	--	NA	--	129	
1989.....	NA	--	NA	--	177	--	2/	--

Year Beginning	Dec. 1	Following Year						
		Jan. 1	Mar. 1	Apr. 1	Jun. 1	Jul. 1	Sep. 1	Oct. 1
		1,000 Bushels						
CORN								
1985.....	--	445	--	275	198	--	--	--
1986.....	5,254	--	5,224	--	6,040	--	6,167	--
1987.....	8,137	--	6,991	--	7,190	--	2,619	--
1988.....	6,640	--	6,415	--	4,828	--	4,146	--
1989.....	3,066	--	1,517	--	2/	--	--	--

NA = Not Available. 1/ Includes stocks at mills, elevators, warehouses, terminals, processors, and CCC owned grain at bin sites. Utah on farm estimates were discontinued starting April 1, 1986, but are included in the National total. 2/ Estimates available June 30, 1990.

Fruits

Utah's 1989 fruit crop showed mixed changes from the previous year, as cold February temperatures damaged soft fruit crops such as peaches, apricots, and sweet cherries. However, more hardy fruits such as apples, pears, and tart cherries suffered little damage, and mostly good crops were reported.

Apple production at 56 million pounds, was up 40 percent from 1988, and rated as the seventh largest apple crop in Utah history. Utilized production was 54 million pounds. Producers received an average price of 10.9 cents per pound, 1.6 cents lower than last year. The total value of utilized production at $5.9 million, was 21 percent higher than the previous year.

Apricots decreased by 20 percent from 1988 to a level of 400 tons in 1989. Utilized production was 350 tons. Producers received an average of $470 per ton, 90 dollars per ton less than the previous year. Total value of production was $165,000, up 9 percent from 1988.

Peach production at 11.0 million pounds, was down 12 percent from 1988. Utilized production at 10.5 million pounds was 11 percent below the previous year. Average price per pound was 21.5 cents, bringing total value of the crop to $2.3 million, one percent higher than in 1988.

Pears in Utah at 2,600 tons, were 30 percent higher than the year before. The average price received by growers was $340 per ton, 44 dollars less than 1988. Total value for the crop was $884,000, 15 percent higher than a year earlier.

Sweet Cherry producers harvested 1,700 tons, 300 tons less than 1988. Utilized production was 1,600 tons. Average price received by growers was $800 per ton, up $24 from the previous year. The total value of the crop was $1.3 million dollars, 15 percent lower than 1988.

Tart cherry production was 24.0 million pounds, 118 percent higher than 1988, and equal to the second largest crop ever. Utilized production was 22.5 million pounds. Tart cherry prices for the 1989 crop will not be published until July 10, 1990.

Utah Usual Blooming and Harvesting Dates, Fruits 1/

Fruit Crop	1989 Total Prod.	Usual Dates of Full Bloom	Usual Harvesting Dates			Principal Producing Areas and Counties
			Begins	Most Active	Ends	
	Tons					
Apricots	400	Apr 5 - 10	Jun 10	Jun 15-Jul 30	Aug 5	Washington, Box Elder, Weber, Davis, Utah
Sweet Cherries	1,700	Apr 15 - 24	Jun 10	Jun 15-Jul 15	Jul 20	Washington, Utah, Davis, Box Elder, Weber
Pears	2,600	Apr 25 - 30	Aug 5	Aug 10-Sep 15	Sep 23	Washington, Utah, Cache, Weber, Salt Lake, Box Elder
	Mil. Lbs					
Apples	56.0	May 5	Sep 19	Sep 19-Oct 8	Nov 1	Utah, Box Elder, Davis, Cache
Tart Cherries	24.0	Apr 24	Jul 10	Jul 15-Jul 30	Aug 10	Utah, Box Elder, Weber Davis, Salt Lake
Peaches	11.0	Apr 10 - 20	Jul 25	Aug 25-Sep 15	Sep 20	Utah, Box Elder, Davis Weber, Salt Lake

1/ USDA Agriculture Handbook 186, December 1975.

Utah Fruit - Production and Value, Selected Years

Year	Apples	Peaches	Pears	Sweet Cherries	Tart Cherries	Apricots	Total
			Utilized Production - Tons				
1940.....	10,320	17,712	4,525	3,100	2,300	7,800	45,757
1950.....	6,768	2,688	875	440	800	400	11,971
1960.....	5,150	4,300	4,180	1,200	2,800	2,500	20,130
1970.....	13,750	6,500	4,300	2,300	4,900	1,300	33,050
1980.....	25,000	5,500	3,000	4,100	6,450	1,500	45,550
1983.....	29,000	6,000	3,500	4,300	11,500	600	54,900
1984.....	22,500	6,000	3,100	3,850	6,000	300	41,750
1985.....	27,500	5,500	2,500	2,100	10,500	400	48,500
1986.....	17,000	5,500	2,200	2,160	9,250	300	36,410
1987.....	31,500	5,500	2,500	1,770	10,000	350	51,620
1988.....	19,500	5,900	2,000	1,940	4,800	400	34,540
1989.....	27,000	5,250	2,600	1,600	11,250	350	48,050
			Value - $1,000				
1940.....	339	590	172	248	101	212	1,662
1950.....	733	431	126	124	142	72	1,658
1960.....	496	587	451	488	389	242	2,653
1970.....	1,570	826	439	830	696	176	4,537
1980.....	5,472	1,925	900	2,464	2,438	540	13,739
1983.....	5,784	1,800	1,036	2,808	9,254	156	20,838
1984.....	4,650	1,800	899	1,881	2,879	105	12,214
1985.....	6,650	1,870	735	1,624	4,832	152	15,863
1986.....	4,690	1,947	759	1,509	3,533	104	12,542
1987.....	4,635	1,760	680	1,181	1,654	147	10,057
1988.....	4,860	2,242	768	1,505	1,826	152	11,353
1989.....	5,886	2,258	884	1,280	1/	165	2/10,473

1/ 1989 price and value for tart cherries will be published July 10, 1990.
2/ Excludes tart cherries.

Commercial Apples 1/: Production, Use, and Value, Utah, Selected Years.

Year	Production			Utilization		Average Price	Value of Utilized Production
	Total	Not Utilized	Utilized	Fresh	Processed		
	Million Lbs.					Cents Per Lb.	1,000 $
1940.....	22.3	2.7	19.6	--	--	1.7	339
1950.....	13.5	--	13.5	--	--	5.4	733
1960.....	10.3	--	10.3	--	--	4.8	496
1970.....	28.0	.5	27.5	21.3	6.2	5.7	1,570
1980.....	52.0	2.0	50.0	42.0	8.0	10.9	5,472
1983.....	58.0	--	58.0	44.0	14.0	10.0	5,784
1984.....	45.0	--	45.0	33.0	12.0	10.3	4,650
1985.....	57.0	2.0	55.0	44.5	10.5	12.1	6,650
1986.....	34.0	--	34.0	26.5	7.5	13.8	4,690
1987.....	68.0	5.0	63.0	36.0	27.0	7.4	4,635
1988.....	40.0	1.0	39.0	30.0	9.0	12.5	4,860
1989 2/...	56.0	2.0	54.0			10.9	5,886

1/ Estimates through 1933 were for all apples. Since 1934 estimates are for commercial production including orchards with more than 100 trees. 2/ Preliminary, revised estimates available July 10, 1990.

Apricots: Production, Use, and Value, Utah, Selected Years.

Year	Production			Utilization		Average Price	Value of Utilized Production
	Total	Not Utilized	Utilized	Fresh 1/	Processed		
	Tons					Dollars per Ton	1,000 $
1940.....	7,800	--	7,800	--	--	27.20	212
1950.....	400	--	400	--	--	180.00	72
1960.....	2,500	--	2,500	--	--	96.60	242
1970.....	1,300	--	1,300	1,300	0	135.00	176
1980.....	1,500	--	1,500	1,500	0	360.00	540
1983.....	650	50	600	600	0	260.00	156
1984.....	350	50	300	300	0	350.00	105
1985.....	450	50	400	400	0	380.00	152
1986.....	350	50	300	300	0	347.00	104
1987.....	450	100	350	350	0	420.00	147
1988.....	500	100	400	400	0	380.00	152
1989.....	400	50	350	350	0	470.00	165

1/ Small quantities processed are included in "fresh" to avoid disclosure of individual operations.

Peaches: Production, Use, and Value, Utah, Selected Years.

Year	Production			Utilization		Average Price	Value of Utilized Production
	Total	Not Utilized	Utilized	Fresh	Processed		
	Million Lbs.					Cents per Lb.	1,000 $
1940.....	35.4	--	35.4	--	--	1.7	590
1950.....	5.4	--	5.4	--	--	8.0	431
1960.....	8.6	--	8.6	--	--	6.8	587
1970.....	13.0	--	13.0	13.0	0	6.4	826
1980.....	11.0	--	11.0	11.0	0	17.5	1,925
1983.....	12.0	--	12.0	12.0	0	15.0	1,800
1984.....	12.0	--	12.0	12.0	0	15.0	1,800
1985.....	11.5	0.5	11.0	11.0	0	17.0	1,870
1986.....	11.0	--	11.0	11.0	0	17.7	1,947
1987.....	12.0	1.0	11.0	11.0	0	16.0	1,760
1988.....	12.5	0.7	11.8	11.8	0	19.0	2,242
1989.....	11.0	0.5	10.5	10.5	0	21.5	2,258

Pears: Production, Use, and Value, Utah, Selected Years.

Year	Production			Utilization		Average Price	Value of Utilized Production
	Total	Not Utilized	Utilized	Fresh	Processed		
	Tons					Dollars per Ton	1,000 $
1940.....	4,525	--	4,525	--	--	38.00	172
1950.....	875	--	875	--	--	144.00	126
1960.....	4,380	200	4,180	--	--	108.00	451
1970.....	4,300	--	4,300	--	--	102.00	439
1980.....	3,000	--	3,000	3,000	0	300.00	900
1983.....	3,500	--	3,500	3,500	0	296.00	1,036
1984.....	3,200	100	3,100	3,100	0	290.00	899
1985.....	2,500	--	2,500	2,500	0	294.00	735
1986.....	2,200	--	2,200	2,200	0	345.00	759
1987.....	2,600	100	2,500	2,500	0	272.00	680
1988.....	2,000	--	2,000	2,000	0	384.00	768
1989.....	2,600		2,600	2,600	0	340.00	884

Sweet Cherries: Production, Use and Value, Utah, Selected Years.

Year	Production			Utilization		Average Price	Value of Utilized Production
	Total	Not Utilized	Utilized	Fresh	Processed		
	- - - - - - - - - - Tons - - - - - - - - - -					Dollars per Ton	1,000 $
1940.....	3,100	--	3,100	--	--	80.00	248
1950.....	440	--	440	--	--	282.00	124
1960.....	1,200	--	1,200	--	--	407.00	488
1970.....	2,300	--	2,300	2,030	270	361.00	830
1980.....	4,100	--	4,100	3,500	600	601.00	2,464
1983.....	4,400	100	4,300	1/	1/	653.00	2,808
1984.....	4,200	350	3,850	1/	1/	489.00	1,881
1985.....	2,200	100	2,100	1/	1/	773.00	1,624
1986.....	2,160	--	2,160	1,300	860	699.00	1,509
1987.....	1,800	30	1,770	940	830	667.00	1,181
1988.....	2,000	60	1,940	1,430	510	776.00	1,505
1989.....	1,700	100	1,600	1,200	400	800.00	1,280

1/ Data not published to avoid disclosure of individual operations.

Tart Cherries: Production, Use and Value, Utah, Selected Years.

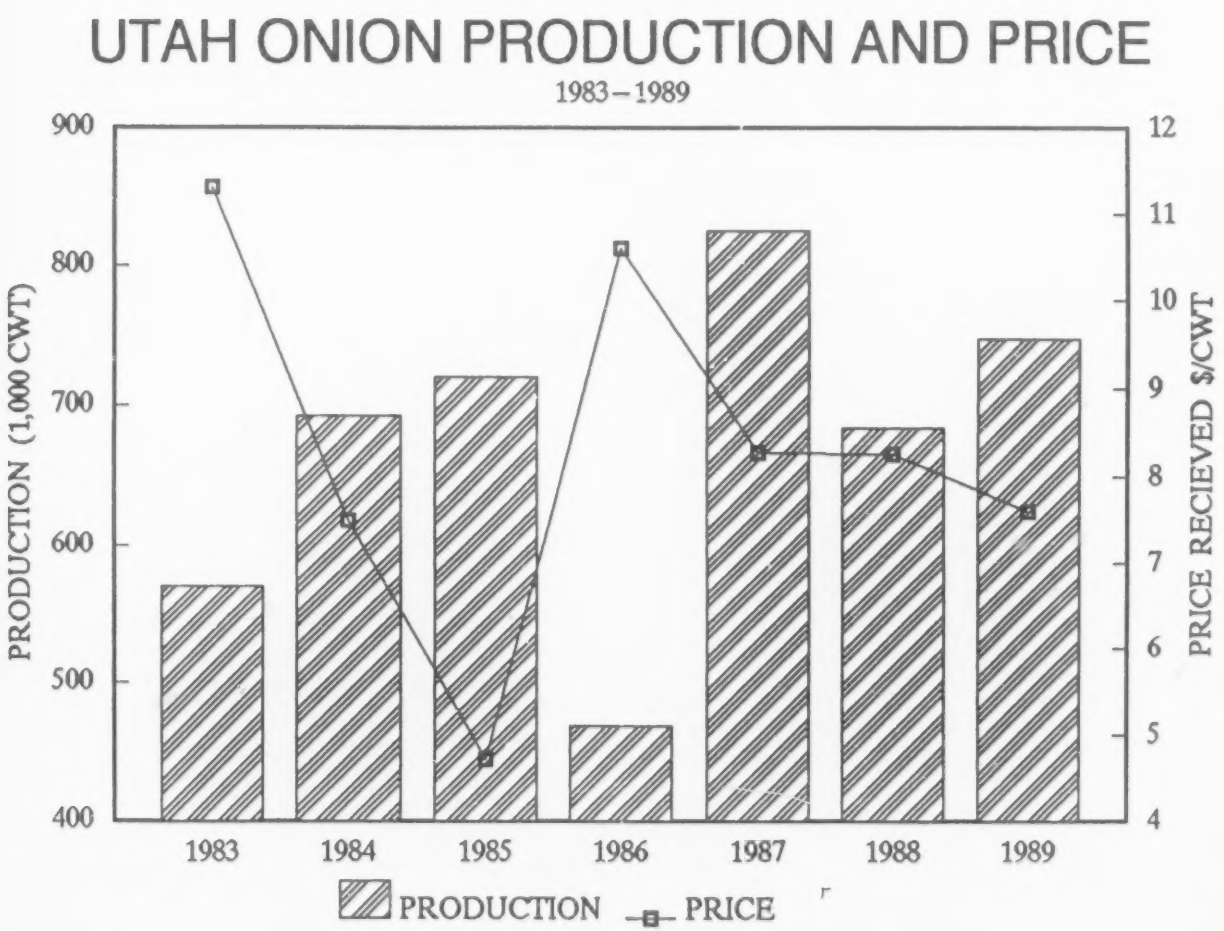
Year	Production			Utilization		Average Price	Value of Utilized Production
	Total	Not Utilized	Utilized	Fresh	Processed		
	- - - - - - - - Million Lbs. - - - - - - - -					Cents per Lb.	1,000 $
1940.....	4.6	--	4.6	--	--	2.2	101
1950.....	1.6	--	1.6	--	--	8.9	142
1960.....	5.6	--	5.6	--	--	6.9	389
1970.....	9.8	--	9.8	.8	9.0	7.1	696
1980.....	13.0	.1	12.9	.3	12.6	18.9	2,438
1983.....	24.0	1.0	23.0	.2	22.8	40.2	9,254
1984.....	12.0	--	12.0	.1	11.9	24.0	2,879
1985.....	21.0	--	21.0	.2	20.8	23.0	4,832
1986.....	18.5	--	18.5	.6	17.9	19.1	3,533
1987.....	29.0	9.0	20.0	.2	19.8	8.3	1,654
1988.....	11.0	1.4	9.6	.1	9.5	19.0	1,826
1989.....	24.0	1.5	22.5	.1	22.4	1/	1/

1/ 1989 price and value will be published July 10, 1990.

Vegetables

The 1989 Utah onion crop at 748,000 hundredweight (cwt.), was the third largest crop ever recorded in the State. Total production in 1989 was 9 percent higher than 1988. Utah farmers planted 1,800 acres in 1989, and harvested 1,700, with a yield of 440 cwt. per acre. Growers received an average of $7.60 per cwt., and total value of the crop was $5.0 million, up 4 percent from 1988.

Production of vegetables for processing in 1989 was 7,270 tons, down 8 percent from 1988. Total value of vegetables sold for processing was $1.2 million.



Onions, Summer Storage (Fresh Market): Acreage, Yield, Production, and Value, Utah, Selected Years.

Year	Acreage		Yield per Acre	Production	Quantity not Sold 1/	Sales	Value of Sales	
	Planted	Harvested					Per Cwt.	Total
	- - - Acres - - -		Cwt.	- - - 1,000 Cwt. - - -			Dollars	1,000 Dollars
1940...	--	1,100	200	220	38	182	.50	91
1950...	1,150	1,100	270	297	83	214	1.80	385
1960...	750	700	325	228	63	165	2.80	462
1970...	1,000	1,000	300	300	55	245	2.75	674
1980...	2,000	1,900	345	656	98	558	13.20	7,366
1983...	2,000	1,900	300	570	91	479	11.30	5,413
1984...	2,300	2,200	315	693	119	574	7.50	4,305
1985...	1,700	1,600	450	720	120	600	4.71	2,826
1986...	1,500	1,400	335	469	61	408	10.60	4,325
1987...	1,800	1,700	485	825	115	710	8.27	5,872
1988...	1,900	1,800	380	684	101	583	8.26	4,816
1989...	1,800	1,700	440	748	91	657	7.60	4,993

1/ Includes shrinkage, waste, and cullage.

Vegetables for Processing 1/: Acreage, Production, and Value, Utah, Selected Years.

Year	Acreage		Production	Value
	Planted	Harvested		
	- - - - Acres - - - -		Tons	1,000 Dollars
1940.....	--	22,460	83,900	1,526
1950.....	--	24,870	103,000	3,139
1960.....	12,770	11,080	72,040	2,235
1970.....	9,000	8,300	45,900	1,981
1980.....	4,900	4,890	19,900	2,245
1983.....	2,720	2,590	7,810	1,493
1984.....	2,350	2,250	8,150	1,432
1985.....	2,400	2,400	10,390	1,559
1986.....	1,230	1,230	3,330	496
1987.....	2,430	2,330	9,210	1,285
1988.....	2,400	2,300	7,890	1,081
1989.....	2,500	2,400	7,270	1,156

1/ Includes tomatoes, green peas, sweet corn, snap beans, green lima beans, table beets, and cucumbers for pickles.

Cattle and Calves

Utah cattlemen had a total of 800,000 cattle and calves on farms on January 1, 1990, down 4 percent from the previous year. The all-cow inventory at 413,000 head, was down slightly from last year's level of 418,000 head. Beef cows at 333,000 head, dropped 3 percent from the 1989 level, while milk cows at 80,000 head, increased 6,000 head from the previous year. Beef cow replacement heifers weighing 500 pounds or more were estimated at 59,000 head--a drop of 1,000 from last year. Milk cow replacements totaled 49,000 head, compared with 42,000 in 1989. Other heifers at 41,000, dropped 7,000 head from the previous year's level. A large part of the decrease in cattle numbers was in the category of steers weighing 500 pounds or more. The January 1, 1990 level was at 90,000 head--a drop of 12,000 from the previous year. Bulls at 20,000 head, dropped 3,000 from last year. Calves weighing less than 500 pounds were estimated at 128,000 head, down 7 percent from January 1, 1989.

Utah's 1989 calf crop totaled 360,000 head, down 4 percent from the previous year. The calving rate was 87 percent, 3 percent below the previous year. Cattle and calves on full feed for slaughter totaled 41,000 head, a 7,000 head decrease from the 1989 level.

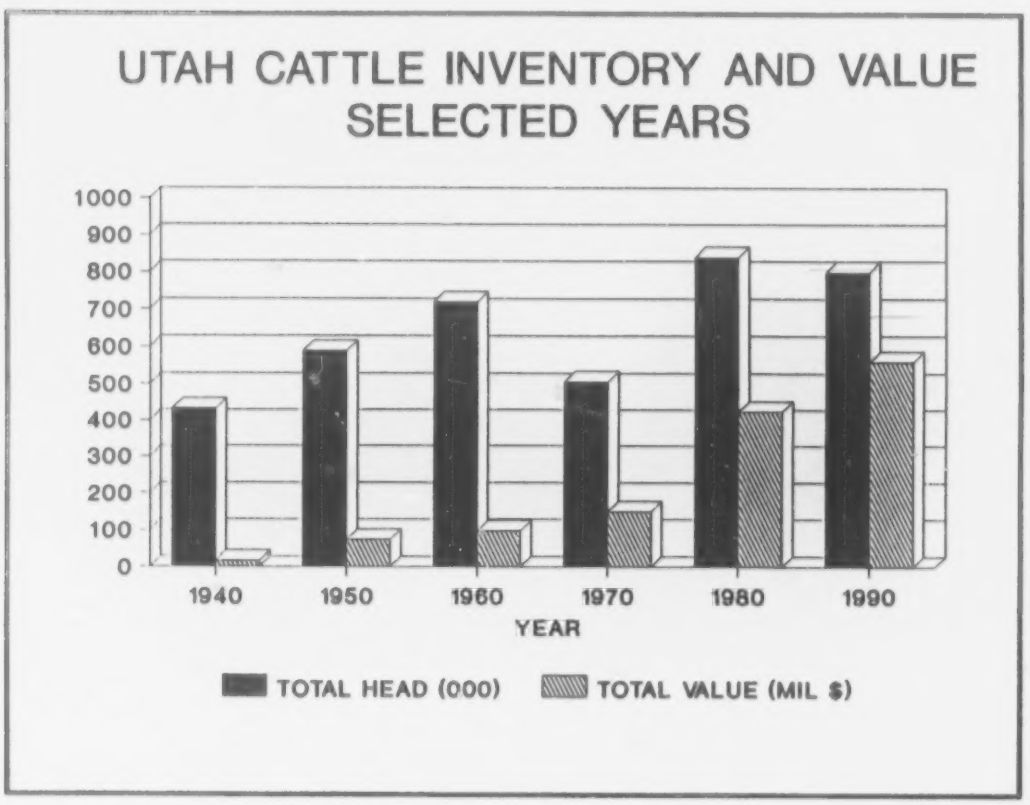
The 1989 estimate of the number of cattle operations was 8,300--down 200 from the previous year.

The average value per head was $700.00 on January 1, 1990, compared with $645.00 on January 1, 1989. The total inventory was valued at $560.0 million, up 5 percent from the 1989 level.

Beef production during 1989 totaled 334.4 million pounds, up fractionally from the previous year. Marketings during the year, at 412.7 million pounds, were up 12 percent from 1988. Total cash receipts for the year were at $287.1 million--up 12 percent from the previous year. The average price per hundredweight (cwt.) of cattle was $67.00, a 50 cent increase from the 1988 average, while calves averaged $89.40 per cwt. during the year, down $2.10 from the previous year.

All Cattle: Number of Cattle Farms, and Number and Value of Cattle on Farms, Utah, January 1, Selected Years

Year	Farms		Cattle on Farms January 1			
	With Cattle	With Milk Cows	Total Number	Value Per Head	Value Total	On Feed For Market
			1,000 Head	Dollars	1,000 Dollars	1,000 Head
1940.....	--	--	432	38.20	16,502	--
1950.....	--	--	588	126.00	74,088	40
1960.....	--	--	719	136.00	97,784	61
1970.....	10,000	3,800	808	185.00	149,480	57
1980.....	10,000	2,600	840	505.00	424,200	60
1983.....	9,600	2,600	950	390.00	370,500	49
1984.....	9,500	2,400	865	400.00	346,000	35
1985.....	9,300	2,300	800	395.00	316,000	40
1986.....	8,800	2,100	790	395.00	312,050	33
1987.....	8,600	2,000	770	410.00	315,700	36
1988.....	8,500	1,600	800	540.00	432,000	45
1989.....	8,300	1,500	830	645.00	535,350	48
1990.....	--	--	800	700.00	560,000	41



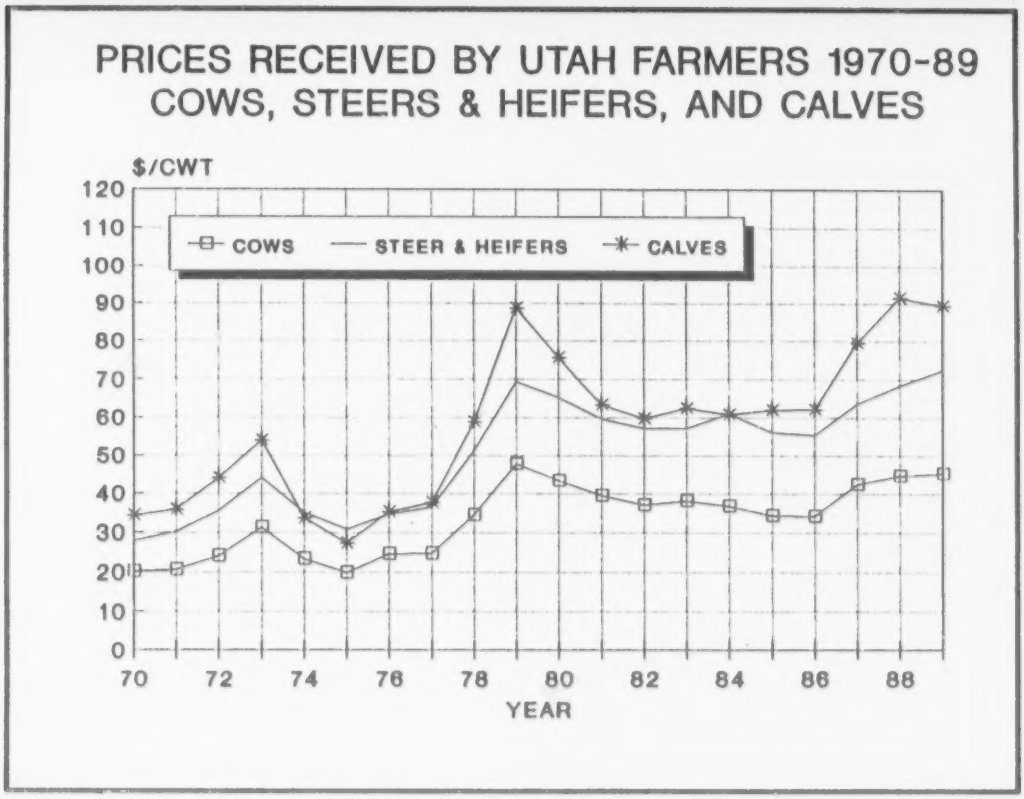
Cattle: Inventory by Classes and Age, Utah, January 1, Selected Years.

Year	All Cattle and Calves	For Milk			Beef Cattle				
		Cows and Heifers 2 Yrs.	Heifers 1-2 Yrs.	Heifer Calves	Cows 2 Yrs. +	Heifers 1-2 Yrs.	Calves	Steers 1 Yr. +	Bulls 1 Yr. +
	1,000 Head								
1940....	432	103	25	32	115	34	77	37	9
1950....	588	108	25	32	194	62	101	54	12
1960....	719	108	31	35	252	65	154	65	9
1970 1/.	808	82	25	28	342	69	188	59	15

1/ Beginning with January 1, 1971, the classification estimates for cattle were changed from sex and age to sex and weight--See Table below.

Cattle: Inventory by Classes and Weight, Utah, January 1, Selected Years.

Year	All Cattle and Calves	All Cows and Heifers that have Calved			Heifers 500 Pounds and Over				Steers 500 Lbs. & Over	Bulls 500 Lbs. & Over	Steers, Heifers & Bulls Under 500 Lbs.
		Total	Beef Cows	Milk Cows	Beef Cow Replace-ments	Milk Cow Replace-ments	Other	Total			
	1,000 Head										
1970..	808	392	316	76	52	44	26	122	75	17	202
1980..	840	400	325	75	54	42	33	129	80	18	213
1983..	950	460	374	86	67	35	42	144	104	22	220
1984..	865	424	340	84	54	37	28	119	104	17	201
1985..	800	369	289	80	45	40	31	116	96	16	203
1986..	790	380	298	82	44	44	34	122	95	17	176
1987..	770	394	320	74	45	36	41	122	90	19	145
1988..	800	410	337	73	54	38	44	136	95	19	140
1989..	830	418	344	74	60	42	48	150	102	23	137
1990..	800	413	333	80	59	49	41	149	90	20	128



Calf Crop: Utah, Selected Years

Year	Cows and Heifers 2 yrs. & Older January 1	Cows that Have Calved January 1	Calf Crop	Calf Crop As Percent of Cows and Heifers 2+ January 1 1/ a/	Calf Crop as Percent of Cows Calved January 1 1/ a/
1940.....	218	--	174	80	--
1950.....	302	--	263	87	--
1960.....	360	--	317	88	--
1970.....	424	392	372	88	95
1980.....	--	400	358	--	90
1983.....	--	460	350	--	76
1984.....	--	424	310	--	73
1985.....	--	369	320	--	87
1986.....	--	380	340	--	89
1987.....	--	394	365	--	93
1988.....	--	410	375	--	91
1989.....	--	418	360	--	86

1/ Not strictly a calving rate. Figure represents calf crop expressed as percentage of the number of: a/ cows and heifers 2 years old and over on farms and ranches January 1 beginning of year, b/ cows that have calved on hand January 1 beginning of year.

Cattle and Calves: Inventory, Supply, and Disposition, Utah, Selected Years.

Year	Inventory Beginning of Year	Calf Crop	Inshipments	Marketings 1/		Farm Slaughter 2/	Deaths		Inventory End of Year
				Cattle	Calves	Cattle & Calves	Cattle	Calves	
	1,000 Head								
1940....	432	174	25	101	45	11	8	12	454
1950....	588	263	41	139	98	12	16	15	612
1960....	719	317	54	234	111	11	14	22	698
1970....	808	372	50	213	140	4	17	24	832
1980....	840	358	50	205	106	5	16	41	875
1983....	950	350	36	299	105	3	22	42	865
1984....	865	310	63	310	60	3	20	45	800
1985....	800	320	50	222	89	4	19	46	790
1986....	790	340	70	254	113	3	18	42	770
1987....	770	365	77	250	102	3	15	42	800
1988....	800	375	95	288	101	2	14	35	830
1989....	830	360	85	316	115	4	10	30	800

1/ Includes custom slaughter for use on farms where produced, State outshipments, but excludes interfarm sales within the State. 2/ Excludes custom slaughter at commercial establishments.

Cattle and Calves: Production and Income, Utah, Selected Years.

Year	Production 1/	Marketings 2/	Average Price per 100 Lbs.		Value of Production	Cash Receipts 3/	Value of Home Consumption	Gross Income
			Cattle	Calves				
	1,000 Pounds		Dollars		1,000 Dollars			
1940.....	105,545	103,170	6.80	8.90	--	7,478	198	7,676
1950.....	157,125	158,135	23.20	26.80	--	38,794	850	39,644
1960.....	217,665	257,715	18.40	23.40	41,993	49,373	1,172	50,545
1970.....	256,121	259,978	25.60	34.20	70,803	71,552	2,189	73,741
1980.....	257,490	251,370	60.30	75.50	161,267	156,938	7,518	164,456
1983.....	298,095	367,600	48.40	62.40	149,895	184,533	5,518	190,051
1984.....	259,040	357,400	58.60	60.70	152,317	209,940	6,124	216,064
1985.....	260,660	282,975	53.90	61.90	142,356	155,193	5,121	160,314
1986.....	283,430	326,875	53.30	62.10	153,774	177,954	5,570	183,524
1987.....	301,765	319,570	61.80	79.40	192,893	204,227	5,729	209,956
1988.....	333,085	368,290	66.50	91.50	231,573	255,265	4,309	259,574
1989.....	334,375	412,710	67.00	89.40	233,837	287,077	5,574	292,651

1/ Adjustments made for inshipments and changes in inventories. 2/ Excludes custom slaughter for use on farms where produced and interfarm sales within the State. 3/ Receipts from marketings of live cattle and sale of farm slaughter.

Commercial Cattle and Calf Slaughter 1/: Number and Liveweight, Utah, Annual, Selected Years, and Monthly 1987-89.

Year	Cattle			Calves 2/		
	Number	Weight per Head	Total Live Weight	Number	Weight per Head	Total Live Weight
	1,000 Head	Pounds	1,000 Pounds	1,000 Head	Pounds	1,000 Pounds
1944 3/.....	102.9	--	--	42.5	--	--
1950.....	108.5	965	104,762	21.7	275	5,966
1960.....	212.2	994	210,924	12.7	316	4,008
1970.....	258.5	1,040	268,914	3.2	397	1,270
1980.....	191.9	1,093	209,880	0.2	338	56
1983.....	258.4	1,123	290,270	0.1	364	53
1984.....	307.5	1,120	344,397	0.4	379	133
1985.....	347.6	1,149	399,389	0.5	372	197
1986.....	392.4	1,136	445,826	1.0	354	352
1987.....	427.4	1,174	501,800	0.2	308	76
1988.....	474.8	1,177	558,919	0.4	301	114
1989.....	490.2	1,174	575,874	1.5	247	372
1988						
Jan.	38.9	1,190	46,229	4/	--	--
Feb.	37.9	1,197	45,368	4/	--	--
Mar.	40.4	1,197	48,334	4/	--	--
Apr.	39.4	1,167	45,932	4/	--	--
May	39.4	1,146	45,108	4/	--	--
Jun.	40.8	1,141	46,514	4/	--	--
Jul.	40.0	1,145	45,846	4/	--	--
Aug.	43.4	1,171	50,863	4/	--	--
Sep.	38.7	1,194	46,240	4/	--	--
Oct.	39.2	1,207	47,341	0.1	369	41
Nov.	36.2	1,189	43,069	0.1	307	16
Dec.	40.5	1,188	48,074	0.1	240	23
1989						
Jan.	40.6	1,177	47,767	0.2	345	69
Feb.	38.6	1,161	44,779	0.1	208	27
Mar.	44.6	1,161	51,829	0.2	207	42
Apr.	37.8	1,152	43,532	0.4	201	83
May.	43.0	1,124	48,283	4/	--	--
Jun.	44.3	1,142	50,642	4/	--	--
Jul.	40.2	1,165	46,874	4/	--	--
Aug.	41.0	1,210	49,677	0.1	417	28
Sep.	39.9	1,211	48,265	4/	--	--
Oct.	42.0	1,221	51,315	0.1	231	33
Nov.	40.7	1,183	48,122	0.2	218	37
Dec.	38.0	1,179	44,789	0.1	333	32

1/ Includes slaughter in Federally inspected plants and in other slaughter plants, but excludes animals slaughtered on farms. 2/ Annual data are incomplete in years that monthly data were not published to avoid disclosing individual operations. 3/ First year of record. 4/ Not printed to avoid disclosing individual operations.

Dairy

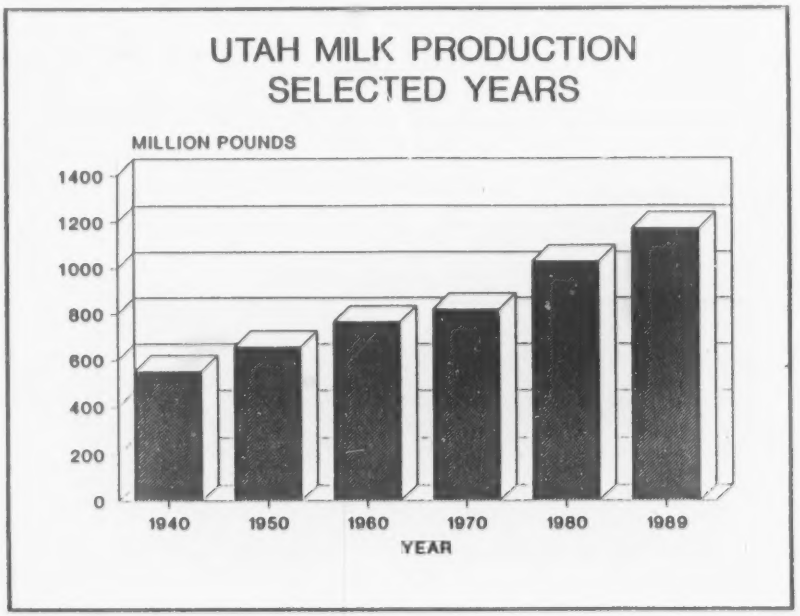
Utah dairymen produced a total of 1,170 million pounds of milk during 1989, up fractionally from the 1988 level. The 1989 production was 1 million pounds below the record level set in 1983.

Production per cow, at 15,395 pounds, increased 239 pounds from 1988, and marked the fifth straight year of increasing milk production per cow. The 1989 milkfat per cow was at 556 pounds, compared with 549 pounds the previous year. Milk per cow, and milkfat per cow, were both new highs.

There were an estimated 1,500 farms with milk cows during 1989--100 below the 1988 number. The number of milk cow farms has decreased steadily over the past seven years.

Cash receipts from milk marketings during the year totaled 148.3 million, up 9 percent from 1988, but 1 percent below the record set in 1983. The price per hundredweight (cwt.) of all milk was $12.90, compared with $11.93 received the previous year, and the record high of $13.24.

Utah's 1989 total cheese production was at 65.0 million pounds--2 percent above the 1988 level. American cheese production, at 37.7 million pounds, increased 5 percent from the previous year. Cheddar cheese accounted for 61 percent of the total American cheese produced. Production of Swiss cheese totaled 23.3 million pounds, a 3 percent decrease from 1988. Swiss cheese accounted for 36 percent of the total cheese produced. Other types of cheese accounted for the remainder of the cheese produced. Ice cream production was at 8.0 million gallons--25 percent below the record high set last year. Ice milk, at 3.7 million gallons, was 5 percent below 1988. There were 21 dairy plants in Utah that produced 1 or more dairy products during 1989.



Milk Cows and Milk Production by Months, Utah, Selected Years.

Year	Jan.	Feb.	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	December	Total 1/
						Milk Cows 2/ (Thousand Head)							
1940...	96	96	96	96	96	96	96	96	96	96	97	97	96
1950...	100	100	100	100	100	100	100	100	100	100	99	99	100
1960...	95	94	94	94	94	94	94	94	94	94	94	93	94
1970...	76	76	77	77	78	78	78	78	79	79	80	80	78
1980...	75	76	76	77	78	78	79	80	79	79	78	79	78
1983...	86	85	86	87	88	89	88	87	86	85	86	86	87
1984...	84	82	81	81	81	82	82	81	80	80	80	80	81
1985...			3/ 80			3/ 83			3/ 85			3/ 83	83
1986...			3/ 83			3/ 84			3/ 83			3/ 78	82
1987...			3/ 76			3/ 79			3/ 79			3/ 76	78
1988...			3/ 75			3/ 77			3/ 78			3/ 76	77
1989...			3/ 74			3/ 76			3/ 77			3/ 75	76
						Milk per Cow 4/ (Pounds)							
1940...	427	426	483	518	597	566	537	485	436	437	398	414	5,730
1950...	527	487	546	587	659	665	625	557	479	479	451	483	6,550
1960...	660	640	710	720	770	735	700	670	630	650	610	635	8,130
1970...	840	800	900	900	940	920	920	910	860	860	810	840	10,500
1980...	1,080	1,010	1,120	1,115	1,195	1,150	1,190	1,140	1,075	1,075	1,015	1,040	13,179
1983...	1,095	1,010	1,165	1,160	1,195	1,180	1,225	1,210	1,130	1,105	1,025	1,025	13,460
1984...	1,010	960	1,060	1,070	1,150	1,130	1,160	1,110	1,060	1,060	990	1,025	12,872
1985...			5/ 3,175			5/ 3,500			5/ 3,630			5/ 3,415	13,675
1986...			5/ 3,434			5/ 3,667			5/ 3,590			5/ 3,410	14,110
1987...			5/ 3,539			5/ 3,684			5/ 3,646			5/ 3,592	14,372
1988...			5/ 3,613			5/ 3,935			5/ 3,897			5/ 3,803	15,156
1989...			5/ 3,700			5/ 3,945			5/ 3,950			5/ 3,890	15,395
						Milk Produced (Million Pounds)							
1940...	41	41	46	50	57	54	52	47	42	42	38	40	550
1950...	53	49	55	59	60	66	62	56	48	48	45	48	655
1960...	63	60	67	68	72	69	66	63	59	61	57	59	764
1970...	64	61	69	69	73	72	72	71	68	68	65	67	819
1980...	81	77	85	86	93	90	94	91	85	85	79	82	1,028
1983...	94	86	100	101	105	105	108	105	97	94	88	88	1,171
1984...	85	79	86	87	93	93	95	90	85	85	79	82	1,039
1985...			6/ 253			6/ 291			6/ 308			6/ 283	1,135
1986...			6/ 285			6/ 308			6/ 298			6/ 266	1,157
1987...			6/ 269			6/ 291			6/ 288			6/ 273	1,121
1988...			6/ 271			6/ 303			6/ 304			6/ 289	1,167
1989...			6/ 274			6/ 300			6/ 304			6/ 292	1,170

1/ Milk cows, average number during year. 2/ Includes dry cows, excludes heifers not yet fresh. 3/ Average for quarter. 4/ Excludes milk sucked by calves. 5/ Quarterly milk production divided by quarterly average of milk cows. 6/ Total produced for quarter.

Milk Cows and Production: Milk and Milkfat on Farms, Utah, Selected Years.

Year	Farms with milk cows	Number of milk cows on farms 1/	Production of Milk and Milkfat				
			Per milk cow		Percentage of fat in all milk Produced	Total	
			Milk	Milkfat		Milk	Milkfat
	- - 1,000 - -		- - Pounds - -		Percent	Million Pounds	
1940...		96	5,730	215	3.75	550	21
1950...		100	6,550	246	3.75	655	25
1960...		94	8,130	297	3.65	764	28
1970...	3.8	78	10,500	382	3.64	819	30
1980...	2.6	78	13,179	468	3.55	1,028	36.5
1983...	2.5	87	13,460	472	3.51	1,171	41.1
1984...	2.3	81	12,827	455	3.55	1,039	36.9
1985...	2.1	83	13,675	485	3.55	1,135	40.3
1986...	1.9	82	14,110	502	3.56	1,157	41.2
1987...	1.7	78	14,372	516	3.59	1,121	40.2
1988...	1.6	77	15,156	549	3.62	1,167	42.2
1989...	1.5	76	15,395	556	3.61	1,170	42.2

1/ Average number on farms during year, excluding heifers not yet fresh.

Milk Disposition: Milk Used and Marketed by Farmers, Utah, Selected Years.

Year	Milk Used on Farms Where Produced				Milk Marketed by Farmers			
	Fed to Calves	Consumed as Fluid Milk and Cream	Used for Farm-Churned Butter	Total	Sold to Plante and Dealers		Sold Directly to Consumers	Total
					As Whole Milk	As Farm Separated Cream		
	- - - - - - - - - - - - - - Million Pounds - - - - - - - - - - - - - -							
1940....	17	61	22	100	296	116	35	1/ 450
1950....	22	51	13	86	515	26	28	569
1960....	18	33	5	56	675	11	22	708
1970....	9	18	--	27	740	2	50	792
1980....	9	9	--	18	985	--	25	1,010
1983....	16	7	--	23	1,116	--	32	1,148
1984....	18	5	--	23	980	--	36	1,016
1985....	18	4	--	22	1,070	--	43	1,113
1986....	20	4	--	24	1,090	--	43	1,133
1987....	21	4	--	25	1,045	--	51	1,096
1988....	20	4	--	24	1,095	--	48	1,143
1989....	17	3	--	20	1,111	--	39	1,150

1/ Includes 3,000,000 for farm churned butter sold.

Milk and Cream Marketed by Farmers: Quality, Price and Cash Receipts, Utah, Selected Years.

Year	Milk Sold to Plants and Dealers				Cream Sold to Plants and Dealers			Milk Sold Directly to Consumers 2/		
	Quantity	Percent Fluid Grade 1/	Price per 100 Lb	Cash Receipts	Quantity Milkfat	Price per Lb Fat	Cash Receipts	Quantity	Price per Quart	Cash Receipts
	Million Pounds	Percent	Dol.	1,000 Dollars	1,000 Pounds	Cents	1,000 Dollars	1,000 Quarts	Cents	1,000 Dollars
1940..	296	--	1.45	4,292	4,330	30	1,299	16,000	7.7	1,232
1950..	515	--	3.69	19,004	970	62	601	13,000	16.0	2,080
1960..	675	--	4.07	27,472	400	55	220	10,000	18.0	1,800
1970..	740	71	5.48	40,552	71	59	42	23,256	21.5	5,000
1980..	985	70	12.50	123,125	--	--	--	11,628	38.0	4,419
1983..	1,116	65	12.90	143,964	--	--	--	14,884	41.0	6,102
1984..	980	66	12.90	126,420	--	--	--	16,744	43.0	7,200
1985..	1,070	74	12.00	128,400	--	--	--	20,000	43.0	8,600
1986..	1,090	78	11.80	128,620	--	--	--	20,000	43.0	8,600
1987..	1,045	82	11.90	124,355	--	--	--	23,721	42.0	9,963
1988..	1,095	80	11.60	127,020	--	--	--	22,326	42.0	9,377
1989..	1,111	82	12.60	139,986	--	--	--	18,140	46.0	8,344

1/ Percentage of milk sold to plants and dealers eligible for fluid use. 2/ Also includes milk produced by institutional herds.

Farm Dairy Products: Marketings, Income, and Value, Utah, Selected Years.

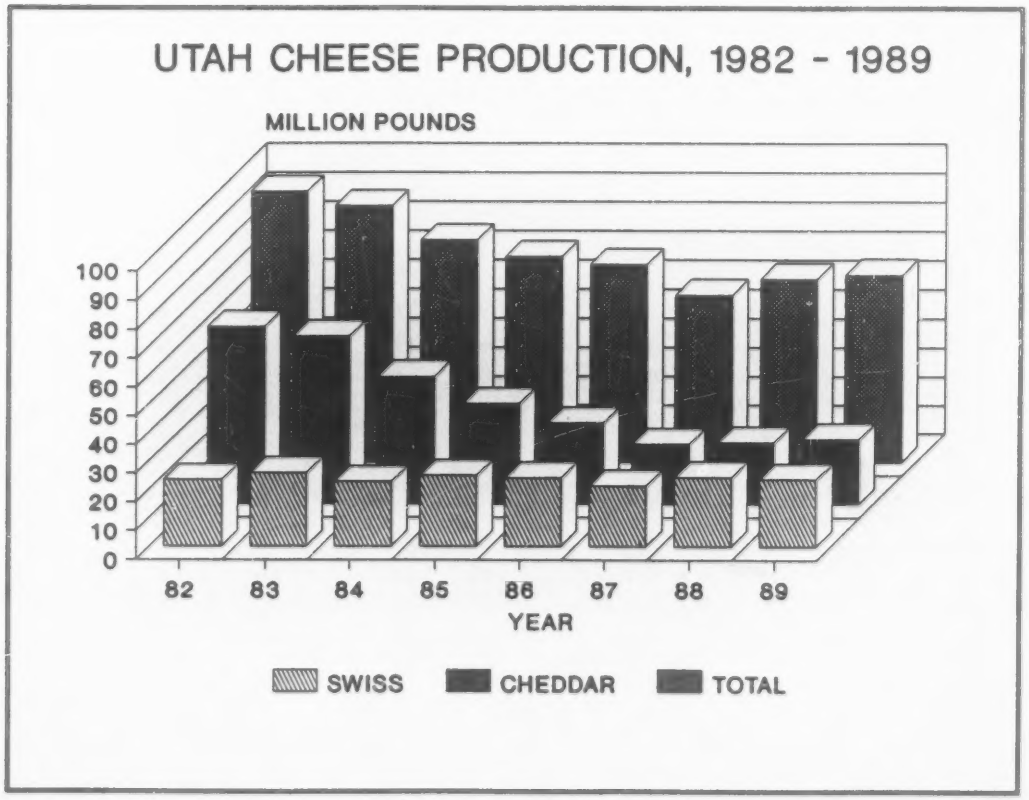
Year	Combined Marketings of Milk and Cream				Used for Milk Cream and Butter on Farms Where Produced		Gross Farm Income from Milk 1/	Farm Value of Milk Produced 2/
	Milk Utilized	Average Returns: Per 100 Pounds Milk	Average Returns: Per Pound Milkfat	Cash Receipts from Marketings	Milk Utilized	Value		
	Million Pounds	Dollars	Dollars	1,000 Dollars	Million Pounds	1,000 Dollars	1,000 Dollars	1,000 Dollars
1940....	450	1.53	.41	6,868	83	1,270	8,138	8,423
1950....	570	3.81	1.02	21,717	63	2,400	24,117	24,956
1960....	708	4.17	1.14	29,492	38	1,585	31,077	31,859
1970....	792	5.76	1.58	45,594	18	1,037	46,631	47,174
1980....	1,010	12.63	3.56	127,544	9	1,137	128,680	129,817
1983....	1,148	13.07	3.72	150,066	7	915	150,981	153,073
1984....	1,016	13.15	3.70	133,620	5	658	134,278	136,645
1985....	1,113	12.31	3.47	137,000	4	492	137,492	139,708
1986....	1,133	12.11	3.40	137,220	4	484	137,704	140,127
1987....	1,096	12.26	3.41	134,318	4	490	134,808	137,382
1988....	1,143	11.93	3.30	136,397	4	477	136,874	139,261
1989....	1,150	12.90	3.57	148,330	3	387	148,717	150,910

1/ Cash receipts from marketings of milk and cream plus value of milk used for home consumption. 2/ Includes value of milk fed to calves.

Butter and Cheese: Production, Utah, Selected Years.

Year	Butter	Cheese				
		American			Swiss 1/	Total 2/
		Cheddar	Other	All		
	- - - - - - - - - - -	1,000 Pounds				- - - - - - - - - - -
1940.....	10,426			4,496	0	4,496
1950.....	5,834			6,901	5,163	12,064
1960.....	7,106	5,460	608	6,068	5,890	11,958
1970.....	8,411	18,279	3,911	22,190	10,776	32,966
1980.....	5,592	40,554	9,709	50,263	21,144	71,659
1983.....	7,616	58,649	3,947	62,596	25,581	88,359
1984.....	6,369	44,571	8,230	52,801	22,455	76,666
1985.....	8,315	35,343	8,939	44,282	24,729	71,088
1986.....	7,936	28,368	12,667	41,035	23,841	68,450
1987.....	9,007	21,098	11,999	33,097	21,000	58,017
1988.....	10,686	21,678	14,219	35,897	24,031	63,563
1989.....	3/	22,842	14,874	37,716	23,320	65,042

1/ Data for years with less than 3 plants published by permission of the firms involved. 2/ Excludes cottage cheese, but includes cheese other than American and Swiss. 3/ Not published to avoid disclosing individual operations.



Cottage Cheese and Dry Whey: Production, Utah, Selected Years.

Year	Cottage Cheese		Dry Whey		
	Curd 1/	Creamed	Human Food	Animal Feed	Total
	1,000 Pounds				
1940.....	670	966	--	--	--
1950.....	2,476	3,563	--	--	--
1960.....	4,796	7,458	--	--	--
1970.....	5,236	8,795	2/	2/	12,190
1980.....	5,427	3/ 8,980	20,309	520	20,829
1983.....	5,412	3/ 8,979	18,440	497	18,937
1984.....	5,651	3/ 9,307	14,514	1,175	15,689
1985.....	5,598	3/ 9,408	18,949	487	19,436
1986.....	4,688	3/ 7,959	18,298	416	18,714
1987.....	4,131	3/ 6,776	16,497	326	16,823
1988.....	4,314	3/ 7,107	4/	4/	
1989.....	4/	4/	4/	4/	

1/ Mostly used for processing into creamed or lowfat cottage cheese. 2/ Less than three plants. 3/ Includes any lowfat production. 4/ Not published to avoid disclosure of individual operations.

Frozen Products: Production, Utah, Selected Years.

Year	Ice Cream 1/	Ice Milk			Sherbet 1/	Water Ices
		Hard	Soft	Total		
	1,000 Gallons					
1940.....	1,235	--	--	201	60	--
1950.....	2,532	--	--	578	76	--
1960.....	3,849	563	771	1,334	350	181
1970.....	4,456	1,189	1,547	2,736	449	292
1980.....	8,198	804	2,078	2,882	593	127
1983.....	8,872	470	1,884	2,354	509	2/
1984.....	8,108	427	2,024	2,451	507	1,261
1985.....	8,712	442	2,051	2,493	603	2/
1986.....	9,447	468	1,956	2,424	715	2/
1987.....	9,824	527	1,980	2,507	660	1,050
1988.....	10,639	1,678	2,204	3,882	588	2/
1989.....	7,969	1,373	2,319	3,692	525	2/

1/ Essentially all hard frozen. 2/ Not published to avoid disclosure of individual plants.

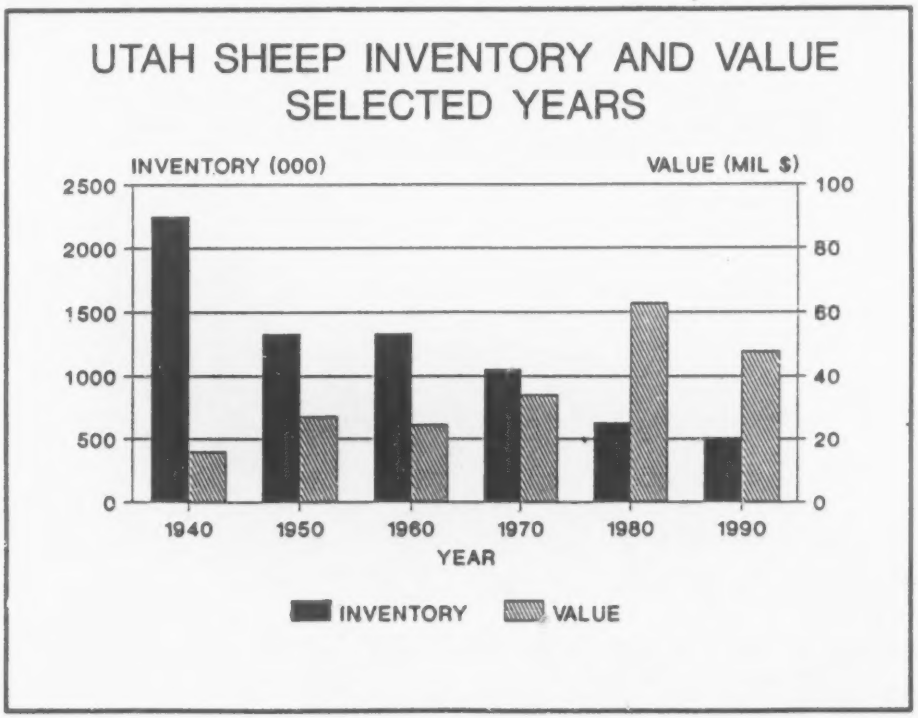
Sheep and Wool

Utah's sheepmen had a total of 509,000 sheep and lambs on farms on January 1, 1990, up 1 percent from the previous year. Inventory of stock sheep and lambs at the beginning of 1990 was 485,000 head--a 1 percent increase from the 1989 level. Ewes one year old and older totaled 407,000 head, up 2,000 from a year earlier. Rams and whethers over one year of age totaled 13,000 head--up 1,000 from January 1, 1989. Ewe lambs 3 months old and older were at 58,000 head, compared with 57,000 in 1989. Ram lambs were at 7,000 head, also up 1 percent from the previous year. Sheep and lambs on feed for slaughter totaled 24,000 head, compared with 23,000 a year earlier. The 1989 lamb crop was estimated at 430,000 head--up 13 percent from the previous year.

There were an estimated 2,100 sheep operations in 1989, virtually the same as the 1988 level. The January 1, 1990 sheep and lamb inventory had an average value per head of $94.00, up significantly from the 1989 level of $84.50. The total value of Utah's sheep inventory was $47.8 million, up 13 percent from the previous year.

Cash receipts during 1989 totaled $19.1 million--19 percent above the 1988 level. Marketings of sheep and lambs totaled 35.7 million pounds, up 26 percent from the previous year. Average sheep price during 1989 was $19.20 per hundredweight (cwt.)--80 cents below the 1988 average. Lambs averaged $60.50 per cwt., 1 dollar below the previous year.

Wool production totaled 4.58 million pounds during 1989, fractionally above the 1988 production. Weight per fleece, at 10.1 pounds, was 3 tenths of a pound above the previous year.



Sheep: Number of Sheep Farms, and Number and Value of Sheep on Farms, Utah, January 1, Selected Years.

Year	Farms With Sheep	Sheep on Farms January 1				
		Number	Value		Stock Sheep Number	Sheep & Lambs on Feed
			Per Head	Total		
		1,000 Head	Dollars	1,000 Dollars	- 1,000 Head -	
1940.....	--	2,248	--	15,895	2,095	153
1950.....	--	1,329	--	27,028	1,269	60
1960.....	--	1,336	--	24,461	1,249	87
1970.....	3,000	1,053	--	33,998	978	75
1980.....	2,400	625	100.50	62,813	595	30
1983.....	2,600	590	58.00	34,220	560	30
1984.....	2,600	568	56.00	31,808	540	28
1985.....	2,500	515	63.50	32,703	490	25
1986.....	2,300	484	70.50	34,122	460	24
1987.....	2,200	464	83.00	38,512	440	24
1988.....	2,100	478	95.50	45,649	460	18
1989.....	2,100	503	84.50	42,504	480	23
1990.....	1/	509	94.00	47,846	485	24

1/ Estimate published with January 1, 1991 sheep inventory.

Stock Sheep: Inventory by Classes, Utah, January 1, Selected Years.

Year	All Stock Sheep	Lambs		Sheep One Year and Over	
		Ewes	Wethers & Rams	Ewes	Rams & Wethers
	- - - - - - - - - - 1,000 Head - - - - - - - - - -				
1940.....	2,095	310	23	1,706	56
1950.....	1,269	165	5	1,066	33
1960.....	1,249	144	6	1,065	34
1970.....	978	125	7	821	25
1980.....	595	80	9	491	15
1983.....	560	66	5	476	13
1984.....	540	60	4	465	11
1985.....	490	54	4	420	12
1986.....	460	45	3	400	12
1987.....	440	50	4	375	11
1988.....	460	52	6	390	12
1989.....	480	57	6	405	12
1990.....	485	58	7	407	13

Lamb Crop: Utah, Selected Years.

Year	Breeding Ewes One Year and Older January 1	Lamb Crop 1/	
		Number	As Percent of Ewes One Year and Older 2/
	- - - - 1,000 Head - - - -		Percent
1940.....	1,706	1,365	80
1950.....	1,066	895	84
1960.....	1,065	927	87
1970.....	821	780	95
1980.....	491	476	97
1983.....	476	440	92
1984.....	465	430	92
1985.....	420	420	100
1986.....	400	400	100
1987.....	375	380	101
1988.....	390	380	97
1989.....	405	430	106

1/ Lamb crop defined as lambs marked, docked or branded. 2/ Not strictly a lambing rate. Percent represents lambs saved expressed as a percent of ewes one year old and older on hand at beginning of year.

Wool Production and Value: Utah, Selected Years

Year	All Sheep Shorn 1/	Weight per Fleece	Shorn Wool Production	Average Price per Pound 2/	Value 3/
	1,000 Head	Pounds	1,000 Pounds	Dollars	1,000 Dollars
1940.....	1,990	9.3	18,507	.27	4,997
1950.....	1,180	9.4	11,092	.58	6,433
1960.....	1,203	9.9	11,950	.39	4,660
1970.....	985	9.8	9,637	.32	3,084
1980.....	575	9.9	5,670	.90	5,103
1983.....	556	10.3	5,739	.57	3,271
1984.....	548	9.9	5,427	.84	4,559
1985.....	498	9.6	4,793	.61	2,924
1986.....	468	10.0	4,668	.66	3,081
1987.....	440	9.8	4,320	.93	4,018
1988.....	467	9.8	4,575	1.36	6,222
1989.....	452	10.1	4,578	1.30	5,951

1/ Includes sheep shorn at commercial feeding yards. 2/ Monthly price weighted by monthly sales of wool. 3/ Production multiplied by annual average price.

Sheep and Lambs: Inventory Numbers, Lamb Crop and Disposition, Utah, Selected Years.

Year	Inventory Beginning of Year	Lambs Saved	Inshipments	Marketing 1/		Farm Slaughter 2/	Deaths		Inventory End of Year
				Sheep	Lambs		Sheep	Lambs	
	1,000 Head								
1940....	2,248	1,365	40	127	894	38	236	110	2,248
1950....	1,329	895	92	39	668	22	125	70	1,392
1960....	1,336	927	54	59	759	21	125	76	1,277
1970....	1,053	780	100	74	646	25	94	85	1,009
1980....	625	476	30	20	346	9	56	50	650
1983....	590	440	17	46	346	8	36	43	568
1984....	568	430	12	71.5	335.5	6	36	46	515
1985....	515	420	10	45.5	324.5	6	30	55	484
1986....	484	400	10	49	306	5	25	45	464
1987....	464	380	19	24.5	292.5	3	24	41	478
1988....	478	380	10	22	281	5	30	27	503
1989....	503	430	11	40	331	4	25	35	509

1/ Includes custom slaughter for use on farms where produced, State outshipments, but excludes interfarm sales within the State. 2/ Excludes custom slaughter for farmers at commercial establishments.

Sheep and Lambs: Production and Income, Utah, Selected Years.

Year	Production 1/	Marketing 2/	Price per 100 Pounds		Value of Production	Cash Receipts 3/	Value of Home Consumption	Gross Income
			Sheep	Lambs				
	1,000 Pounds		Dollars		1,000 Dollars			
1940.....	75,523	76,550	3.35	7.50	--	5,201	147	5,348
1950.....	56,611	56,624	10.60	24.90	--	13,535	278	13,813
1960.....	62,307	71,459	5.30	17.00	10,352	11,367	191	11,558
1970.....	60,909	73,550	7.10	25.40	15,009	16,992	608	17,600
1980.....	35,234	33,530	16.50	61.60	19,751	19,527	542	20,069
1983.....	39,751	43,260	14.50	49.80	17,959	19,108	312	19,420
1984.....	38,330	45,786	14.10	57.70	20,165	21,772	345	22,117
1985.....	37,956	41,949	18.50	65.70	23,120	24,551	388	24,939
1986.....	37,047	40,624	21.30	65.30	22,747	23,400	361	23,761
1987.....	33,173	32,832	21.40	71.60	21,443	21,663	271	21,934
1988.....	31,010	28,420	20.00	61.50	17,038	16,109	387	16,496
1989.....	35,674	35,728	19.20	60.50	19,200	19,137	261	19,398

1/ Adjustments made for changes in inventory and for inshipments. 2/ Excludes custom slaughter for use on farms where produced and interfarm sales within the State. 3/ Receipt from marketings and sale of farm slaughter.

Sheep and Lamb Slaughter: Number and Liveweight, Utah, Annual, Selected Years

Year	Number 1/	Average Liveweight per Head	Total Liveweight
	1,000 Head	Pounds	1,000 Pounds
1944 2/.....	106.2	--	--
1950.....	155.0	101	15,682
1960.....	307.4	102	31,476
1970.....	847.0	106	89,400
1980.....	24.3	116	2,811
1983.....	31.1	110	3,420
1984.....	31.0	113	3,523
1985.....	32.2	110	3,553
1986.....	40.1	109	4,368
1987.....	25.6	112	2,860
1988.....	23.4	119	2,795
1989.....	30.7	122	3,745

1/ Includes slaughter under Federal inspection and other commercial slaughter, excludes farm slaughter. 2/ First year on record.

Sheep and Lamb Slaughter: Number and Liveweight, Utah 1988 and 1989.

Month	Number 1/		Average Liveweight per Head		Total Liveweight	
	1988	1989	1988	1989	1988	1989
Jan.	1.4	2.0	118	127	160	253
Feb.	1.9	1.0	117	125	226	126
Mar.	1.7	2.2	123	129	213	281
Apr.	2.2	1.8	118	129	260	237
May	2.0	2.8	113	123	228	343
Jun.	1.6	2.7	126	123	199	327
Jul.....	1.6	2.5	123	120	203	304
Aug.	1.5	2.4	130	116	193	282
Sep.	2.5	2.6	119	118	299	311
Oct.	2.3	3.9	117	121	265	471
Nov.	2.7	4.1	117	122	315	496
Dec.	2.0	2.7	118	118	233	314

1/ Includes slaughter under Federal inspection and other commercial slaughter, excludes farm slaughter.

Sheep & Lamb Losses

A survey was conducted which asked Utah sheepmen to categorize sheep and lamb losses by cause of death. The January 1, 1990 survey, sponsored by the Utah Department of Agriculture, was used to make State estimates of sheep and lamb losses in 1989.

Sheep and lamb losses totaled 95,000 head during 1989, a 20 percent increase from the 1988 level. Losses included 35,000 undocked lambs, 35,000 docked lambs, and 25,000 sheep. The total value of all losses was $8.5 million--up 20 percent from the previous year. Predators accounted for 54 percent of all losses, compared with 45 percent in 1988. Nonpredator losses were 29 percent of the total, 12 percent below the previous year.

Coyotes were the major cause of loss during 1989, accounting for 39 percent of all losses, and a total value of $3.3 million. Weather was the second leading cause, and was responsible for 7,200 deaths, with a total estimated value of $643,000. Other major causes of loss were mountain lions, lambing complications, and disease.

Unknown causes accounted for 16 percent of all losses, and a total value of $1.4 million.

Sheep and Lamb Losses by Cause, Utah 1989.

Cause	Total Head Lost			Percent of Losses			Value of All Losses 1/
	Lambs Before Docking	Lambs After Docking	Sheep	Lambs Before Docking	Lambs After Docking	Sheep	
	Number			Percent			Dollars
Dog	900	1,100	500	2.7	3.0	2.0	223,000
Coyote	10,600	19,500	7,200	30.3	55.7	28.7	3,329,000
Eagle	1,400	200	0	3.9	.5	.0	143,000
Bear	400	1,000	700	1.0	2.9	2.7	187,000
Mountain Lion	1,000	3,800	1,300	2.8	10.9	5.2	544,000
Other Animals	700	1,200	500	2.0	3.3	1.9	214,000
Total Losses to Predators 2/	14,900	26,700	10,100	42.7	76.3	40.5	4,640,000
Weather Conditions	5,700	800	700	16.4	2.3	2.7	643,000
Disease	2,100	1,200	900	5.9	3.5	3.5	375,000
Poison	300	700	1,800	.9	1.9	7.2	250,000
Lambing Complications	5,000	0	1,000	14.2	.0	3.9	536,000
Old Age	0	0	3,300	.0	.0	13.3	295,000
Theft	100	200	500	.4	.7	2.0	71,000
Other (i.e., bloat, etc.)	1,100	800	1,900	3.0	2.3	7.4	339,000
Total Nonpredator Losses 2/	14,300	3,700	10,000	40.8	10.7	40.0	2,509,000
All Unknown Causes	5,800	4,600	4,900	16.5	13.0	19.5	1,366,000
Total Losses	35,000	35,000	25,000	100.0	100.0	100.0	8,515,000

1/ Value per head of $89.25 assigned based on average of beginning of year and end of year inventory valuations. 2/ Individual classes may not add to total due to rounding.

Hogs and Pigs

The December 1, 1989 Utah hog and pig inventory was 27,000 head, 18 percent below the December 1, 1988 level. The total pig crop for the year was 38,300 head--17 percent below the previous year. A total of 5,100 sows farrowed during 1989, 14 percent below 1988. The number of hog and pig farms at 900, remained virtually the same as the previous year.

The average value per head of Utah's hogs and pigs on December 1, was $76.50, $7.00 above the 1988 level. The total inventory value was $2.1 million, down 10 percent from a year earlier.

Cash receipts during the December 1, 1988 - December 1, 1989 period totaled $3.87 million, up 2 percent from the previous year. Marketings during the year totaled 9.98 million pounds--a one percent drop from the 1988 level. The average price for hogs during 1989 was $38.80 per hundredweight, $1.10 above the previous year.

Hogs and Pigs: Number of Hog Farms, and Inventory and Value of Hogs on Farms, Utah, Selected Years.

Year	Farms	Hogs and Pigs on Farms December 1		
	Number with Hogs	Number	Value	
			Per Head	Total
		1,000 Head	Dollars	1,000 Dollars
1940.....	--	1/ 125	6.60	825
1950.....	--	1/ 88	22.20	1,954
1960.....	--	1/ 68	16.20	1,102
1970.....	2,000	45	23.00	1,035
1980.....	2,200	58	63.00	3,654
1983.....	1,600	33	80.00	2,640
1984.....	1,400	28	75.50	2,114
1985.....	1,200	23	79.00	1,817
1986.....	1,000	25	83.00	2,075
1987.....	900	30	80.50	2,415
1988.....	900	33	69.50	2,294
1989.....	900	27	76.50	2,066

1/ January 1 inventory.

Hogs: Inventory by Classes and Weight Groups, Utah, Dec. 1, Selected Years.

Year	Total	Breeding	Market	Market Hogs and Pigs by Weight Group			
				Under 60 Lbs.	60-119 Lbs.	120-179 Lbs.	180 Lbs. and Over
	1,000 Head						
1963 1/...	50	8	42	19	8	7	8
1970.....	45	8	37	16	9	6	6
1980.....	58	7	51	15	16	14	6
1983.....	33	5	28	13	6	5	4
1984.....	28	4	24	10	5	6	3
1985.....	23	3	20	8	5	4	3
1986.....	25	3	22	9	6	4	3
1987.....	30	4	26	10	7	5	4
1988.....	33	5	28	12	6	5	5
1989.....	27	4	23	8	6	5	4

1/ First year on record.

Pig Crop: Sows Farrowing and Pigs Saved, Utah, Selected Years.

Year	Spring Pig Crop 1/			Fall Pig Crop 2/			Total Pig Crop Spring and Fall	
	Sows Farrowing	Pigs per Litter	Pigs Saved	Sows Farrowing	Pigs per Litter	Pigs Saved	Sows Farrowing	Pigs Saved
	1,000 Head	Head	1,000 Head		Head		1,000 Head	
1940.....	16.0	6.0	96.0	10.0	6.8	68.0	26.0	164.0
1950.....	10.0	6.4	64.0	7.0	6.9	48.0	17.0	112.0
1960.....	5.8	6.7	39.0	6.2	7.3	45.0	12.0	84.0
1970.....	4.8	7.1	34.0	4.6	7.2	33.0	9.4	67.0
1980.....	5.0	7.0	35.0	8.0	6.0	48.0	13.0	83.0
1983.....	2.8	7.4	21.0	2.7	7.7	21.0	5.5	42.0
1984.....	2.3	7.0	16.0	2.2	7.4	16.0	4.5	32.0
1985.....	2.3	6.4	15.0	1.7	7.5	13.0	4.0	28.0
1986.....	2.3	7.9	18.0	1.9	7.6	14.0	4.2	32.0
1987.....	2.3	7.4	17.0	2.1	7.9	17.0	4.4	34.0
1988.....	2.9	7.6	22.0	3.0	8.0	24.0	5.9	46.0
1989.....	2.8	7.3	20.4	2.3	7.8	17.9	5.1	38.3

1/ Spring, December through May. 2/ Fall, June through November.

Hogs and Pigs: Inventory, Supply, and Disposition, Utah, Selected Years.

Year	Inventory Beginning of Year	Annual Pig Crop	Inshipments	Marketings 1/	Farm Slaughter 2/	Deaths	Inventory End of Year
	1,000 Head						
1940.....	125	164	3	139	32	16	105
1950.....	88	112	1	83	19	15	84
1960.....	68	84	1	64	11	10	68
1970.....	43	67	2	58	3	6	45
1980.....	55	83	2	73	2	7	58
1983.....	32	42	2	38	1	4	33
1984.....	33	32	2	35.1	1.4	2.5	28
1985.....	28	28	1	30.5	1.2	2.3	23
1986.....	23	32	2	28	1.1	2.9	25
1987.....	25	34	3	26.6	.2	5.2	30
1988.....	30	46	3	42.5	.8	2.7	33
1989.....	33	38.3	2	42.3	1.4	2.6	27

1/ Includes custom slaughter for use on farm where produced, State out-shipments, but excludes interfarm sales within the State. 2/ Excludes custom slaughter for farmers at commercial establishments.

Hogs and Pigs: Production and Income, Utah, Selected Years.

Year	Production 1/	Marketings 2/	Price per 100 Lbs.	Value of Production	Cash Receipts 3/	Value of Home Consumption	Gross Income
	1,000 Dollars		Dollars	1,000 Dollars			
1940.....	31,760	27,800	5.70	--	1,734	268	2,002
1950.....	23,272	18,687	18.60	--	3,779	544	4,323
1960.....	16,611	13,676	15.70	2,608	2,210	331	2,541
1970.....	13,852	12,488	22.40	3,103	2,797	269	3,066
1980.....	18,483	16,125	36.70	6,762	5,918	488	6,406
1983.....	9,493	8,766	47.20	4,448	4,138	271	4,409
1984.....	7,956	7,971	45.50	3,596	3,627	293	3,920
1985.....	6,780	6,929	41.00	2,768	2,841	226	3,067
1986.....	6,907	6,367	47.00	3,223	2,992	238	3,230
1987.....	7,149	6,428	47.70	3,369	3,066	50	3,116
1988.....	10,789	10,046	37.70	4,056	3,787	157	3,944
1989.....	9,746	9,984	38.80	3,773	3,874	196	4,070

1/ Adjustments made for inshipments and changes in inventories. 2/ Excludes interfarm sales and custom slaughter for use on farms where produced. 3/ Includes receipts from marketings and from sales of farm slaughtered meat.

Commercial Hog Slaughter: Number and Liveweight, Utah, Annual, Selected Years

Year	Number 1/	Average Liveweight per Head	Total Liveweight
	1,000 Head	Pounds	1,000 Pounds
1944 2/.....	258.2	--	--
1950.....	246.7	228	56,259
1960.....	306.4	227	69,695
1970.....	117.4	229	26,837
1980.....	154.5	236	36,428
1983.....	194.6	246	47,808
1984.....	214.0	239	51,192
1985.....	217.1	232	50,409
1986.....	221.6	240	53,092
1987.....	232.0	240	55,596
1988.....	261.5	240	62,736
1989.....	271.1	241	65,284

1/ Includes slaughter under Federal inspection and other commercial slaughter, excludes farm slaughter. 2/ First year on record.

Commercial Hog Slaughter: Number and Liveweight, Utah 1988 and 1989.

Month	Number 1/		Average Liveweight per Head		Total Liveweight	
	1988	1989	1988	1989	1988	1989
Jan.	18.0	24.5	239	239	4,303	5,836
Feb.	19.0	19.9	239	238	4,552	4,736
Mar.	21.3	24.9	241	236	4,137	5,871
Apr.	19.7	22.5	244	238	4,805	5,350
May	20.3	23.2	241	239	4,904	5,547
Jun.	21.6	23.4	238	240	5,129	5,625
Jul.....	21.3	19.8	244	241	5,191	4,777
Aug.	25.5	22.6	233	241	5,950	5,458
Sep.	23.1	22.0	236	242	5,455	5,335
Oct.	25.3	21.7	239	248	6,058	5,398
Nov.	22.7	24.7	243	243	5,523	5,987
Dec.	23.6	21.9	243	245	5,729	5,366

1/ Includes slaughter under Federal inspection and other commercial slaughter, excludes farm slaughter.

Chickens and Eggs

The value of eggs produced in Utah during 1989, totaled $24.9 million, a new record high. This was 17 percent above the previous record set in 1988. Production of 460 million eggs was down 30 million from 1988, however, the average price of eggs per dozen was 65 cents, 13 cents above the previous year. The price of eggs was also a new record high.

The average number of layers during the year was 1.85 million--4 percent below the 1988 level. Eggs produced per layer was 249, compared with 253 the previous year.

Pounds of chicken sold at 3.7 million, dropped 13 percent from 1988. The average price per pound of chickens sold was 7 cents, up fractionally from the previous year. The value of chickens sold in 1989 was $260,000--9 percent below the 1988 value.

Layers and Eggs 1/: Number, Production and Value of Production, Utah, Selected Years.

Year	Average Number of Layers	Eggs per Layer	Total Egg Production	Price per Dozen	Value of Production
	1,000	Number	Millions	Cents	1,000 Dollars
1940.....	1,739	155	269	18.7	4,176
1950.....	2,310	184	425	39.5	13,989
1960.....	1,377	223	307	34.9	8,928
1970.....	1,256	216	271	36.0	8,130
1980.....	1,762	236	416	49.0	16,987
1984.....	1,845	237	438	53.0	19,345
1985.....	1,827	229	418	50.0	17,417
1986.....	1,781	257	457	49.0	18,661
1987.....	1,906	259	493	45.0	18,487
1988.....	1,933	253	490	52.0	21,233
1989.....	1,849	249	460	65.0	24,917

1/ Estimates cover the 12 month period, December 1 previous year through November 30.

Chicken Inventory 1/: Number and Value, Utah, Selected Years.

Date	Hens & Pullets of Laying Age	Pullets 3 Mo. & Over--Not Laying	Pullets Under 3 Months	Other Chickens	Total Chickens		
					Number	Value	
						Average	Total
	- - - - - - - - - - 1,000 Head - - - - - - - - - -					Dollars	1,000 Dollars
Jan. 1, 1940...	2/ 2,191	3/	4/	175	2,366	.63	1,491
Jan. 1, 1950...	2/ 2,871	3/	4/	150	3,021	1.22	3,686
Jan. 1, 1960...	2/ 1,691	3/	4/	69	1,760	.94	1,654
Jan. 1, 1970...	1,320	190	219	10	1,739	1.20	2,087
Dec. 1, 1970...	1,182	218	327	10	1,737	1.10	1,911
Dec. 1, 1980...	1,871	91	134	4	2,100	1.65	3,465
Dec. 1, 1983...	1,800	290	248	7	2,345	2.00	4,690
Dec. 1, 1984...	1,868	120	321	5	2,314	2.35	5,438
Dec. 1, 1985...	1,748	377	297	3	2,425	1.75	4,244
Dec. 1, 1986...	1,858	203	345	3	2,409	1.80	4,336
Dec. 1, 1987...	1,921	232	260	3	2,416	1.80	4,349
Dec. 1, 1988...	1,868	202	186	4	2,260	1.65	3,729
Dec. 1, 1989...	1,779	158	193	3	2,133	1.60	3,413

1/ Excludes commercial broilers. 2/ Includes pullets not of laying age. 3/ Included with hens and pullets. 4/ Included in hens and pullets and in other chickens.

Chickens 1/: Lost, Sold, and Value of Sales, Utah, Selected Years.

Year	Number Lost 2/	Number Sold	Pounds Sold	Price per Pound	Value of Sales
	- - 1,000 Head - -		1,000	Cents	1,000 Dollars
1940.....	426	2,044	6,132	11.0	675
1950.....	634	3,562	13,892	20.7	2,876
1960.....	334	1,018	4,174	8.2	342
1970.....	200	638	2,552	4.0	102
1980.....	260	804	3,055	8.0	244
1983.....	154	955	3,534	13.0	459
1984.....	185	1,090	4,360	9.0	392
1985.....	170	1,250	5,000	8.0	400
1986.....	165	860	3,440	10.0	344
1987.....	212	955	3,820	6.0	229
1988.....	202	1,070	4,280	6.7	287
1989.....	170	930	3,720	7.0	260

1/ Estimates exclude broilers and cover the 12 month period January 1 through December 31--in 1970, estimating period changed to Dec. 1 previous year through Nov. 30. 2/ Includes death and other losses during the 12 month period.

Turkeys

Utah turkey growers raised 3.59 million turkeys during 1989, 8 percent below the previous year.

The average price received per pound for turkeys was 52 cents, compared with 54 cents a year earlier. The total value of turkeys produced was $44.1 million, 9 percent below the 1988 total value. Production of 84.7 million pounds dropped 6 percent from the previous year. The average live weight per bird was 23.6 pounds, compared with 23.1 pounds during 1988.

Utah turkey farms are located primarily in Sanpete and Sevier counties.

Turkeys: Production and Gross Income, Utah, Selected Years.

Year	Raised 3/	Average Weight	Produced	Per Pound 1/	Gross Income 2/
	1,000 Head	Pounds	1,000 Pounds	Cents	1,000 Dollars
1940.....	854	16.0	13,656	17.4	2,376
1950.....	1,673	21.5	35,914	27.8	9,984
1960.....	2,801	20.2	56,515	24.3	13,733
1970.....	3,946	21.6	85,234	22.1	18,837
1980.....	2,409	22.2	53,480	50.0	26,740
1983.....	2,328	23.4	54,475	47.0	25,603
1984.....	2,387	22.8	54,424	59.0	32,110
1985.....	3,082	24.3	74,893	62.0	46,433
1986.....	3,390	22.7	76,953	64.0	49,250
1987.....	3,731	24.2	90,290	42.0	37,922
1988.....	3,900	23.1	90,090	54.0	48,649
1989.....	3,590	23.6	84,724	52.0	44,056

1/ Live weight equivalent price. 2/ Includes home consumption, less than 1% of production. 3/ Includes heavy and light breeds.

Bees and Honey

Utah honey production totaled 1.9 million pounds in 1989, up 28 percent from the 1988 level. This was the highest production recorded since 1979. The number of colonies, at 43,000, was up 7,000 colonies from the previous year. The value per pound of honey averaged 53 cents, down considerably from the 1988 price of 61 cents per pound. The total value of the honey produced in 1989 was 1.0 million dollars, 11 percent above the 1988 level.

Several Utah apiaries transport their bees to surrounding states, and honey produced during these moves is counted in the state where the honey was produced.

Honey: Number of Colonies, Production, Average Price and Value, Utah, Selected Years.

Year	Colonies of Bees	Honey			
		Production		Value	
		Per Colony	Total	Per Pound	Total
	1,000 Colonies	Pounds	1,000 Pounds	Cents	1,000 Dollars
1940.....	53	45	2,385	3.6	86
1950.....	49	51	2,499	11.0	275
1960.....	52	34	1,768	15.6	276
1970.....	50	36	1,800	18.1	326
1980.....	46	33	1,518	58.1	882
1983 1/..					
1984 1/..					
1985 1/..					
1986.....	35	45	1,575	61	961
1987.....	35	48	1,688	54	912
1988.....	36	41	1,476	61	900
1989.....	43	44	1,892	53	1,003

1/ Estimates not made 1982-85.

Mink

Utah mink farmers produced a record high 770,000 mink pelts in 1988, 12 percent above the previous record set in 1987. The number of females bred to produce kits in 1989 was 225,000, 8 percent above the previous year. Utah ranks second in the nation in mink production.

Standard was the most common type of pelt produced, accounting for 51 percent of all pelts taken. Demi-buff and Mohagony accounted for 21 and 10 percent, respectively.

There were 175 mink farms in Utah in 1988, compared with 165 in 1987. Leading mink producing counties were Morgan and Utah, which produced over 50 percent of all pelts taken. Other leading counties were Summit, Salt Lake, and Cache.

Mink: Number of Ranches, Pelts Produced, Females Bred, Average Price & Value; Selected Years; Utah & United States

Year	UTAH			UNITED STATES				
	Ranches Producing Pelts	Pelts Produced	Females Bred	Ranches Producing Pelts	Pelts Produced	Females Bred	Average Pelt Price	Value of Pelts
		1,000	1,000		1,000	1,000	Dollars	Mil. Dollars
1970.....	308	396.0	134.0	2,227	4,532	1,416	N/A	N/A
1971.....	261	340.0	108.0	1,615	3,380	1,011	N/A	N/A
1972.....	225	285.0	94.5	1,380	2,965	858	N/A	N/A
1973.....	218	283.0	100.0	1,329	3,037	902	N/A	N/A
1974.....	198	315.0	103.0	1,221	3,128	905	N/A	N/A
1975.....	186	308.0	99.0	1,084	3,067	870	N/A	N/A
1976.....	168	323.0	97.7	1,015	3,026	847	N/A	N/A
1977.....	185	359.0	113.0	1,040	3,076	887	N/A	N/A
1978.....	191	411.0	129.0	1,095	3,358	925	N/A	N/A
1979.....	190	413.3	141.0	1,105	3,394	978	N/A	N/A
1980.....	190	465.7	149.0	1,122	3,501	1,037	N/A	N/A
1981.....	N/A	N/A	152.1	N/A	N/A	1,074	N/A	N/A
1982.....	175	545.4	N/A	1,116	4,085	N/A	N/A	N/A
1983.....	145	505.5	166.8	1,098	4,137	1,132	29.90	123.7
1984.....	159	487.5	156.0	1,084	4,220	1,115	30.80	130.0
1985.....	132	501.7	148.3	1,042	4,171	1,115	28.0	116.8
1986.....	121	479.4	144.3	989	4,096	1,073	41.30	170.0
1987.....	165	690.0	137.6	1,027	4,122	1,077	43.0	177.2
1988.....	175	770.0	208.0	1,027	4,453	1,198	32.30	143.8
1989.....	1/	1/	225.0	1/	1/	1,200		

N/A=Not Available.

1/ Data available July 20, 1990.

Trout: Number of Operations, Utah, with Sales and Total Sales for the Periods September 1, 1988 - August 31 1989

Number of Operations September 1		Total Sales September 1	
1988	1989	1988 1/	1989
Number		1,000 Dollars	
9	14	5,429	4,731

1/ Total value of sales for 1988 does not include the value of fingerling sales.

Trout: Utah, Sales, Number, Weight, and Value; Foodsize 1/
September 1, 1988 - August 31, 1989

Number of Head		Total Pounds Sold		Total Value of Sales		Average Value per Pound	
1988	1989	1988	1989	1988	1989	1988	1989
Thousands				1,000 Dollars		Dollars	
4,960	2,701	3,967	3,332	5,211	4,617	1.31	1.39

1/ Foodsize fish are defined as being 12" or longer.

Trout: Utah, Sales, Number, Weight, and Value; Stockers 1/
September 1, 1988 - August 31, 1989.

Number of Head		Total Pounds Sold		Total Value of Sales		Average Value per Pound	
1988	1989	1988	1989	1988	1989	1988	1989
Thousands				1,000 Dollars		Dollars	
344	84	107	49	203	97	1.90	1.98

1/ Stockers are defined as being from 6-12" long.

Trout: Utah, Foodsize Percent Sold by Outlet Type;
September 1, 1988 - August 31, 1989.

Live Haulers	Fee/Rec Fishing	Other Producers	Govt.	Direct to Consumer	Processors	Rest & Retail	Other
Percent							
1	1	5	0	76	0	17	0

Trout: Utah, Stockers Percent Sold by Outlet Type;
September 1, 1988 - August 31, 1989.

Live Haulers	Fee/Rec. Fishing	Other Producers	Govt.	Other
Percent				
8	0	92	0	0

Farm Labor

The number of farm workers in the Mountain II region for the period of July 1989 through April 1990, peaked in July 1989 at 84,000 people, 1,000 fewer than in July 1988. The number of self-employed, unpaid, and hired workers also peaked in July at respectively 32,000, 22,000, and 30,000 workers. Total hours worked by all types of workers was also at the highest level during July.

Wage rates for the year were generally higher during the January and April survey periods, when the average wage rate for all hired workers, regardless of method of pay or type of worker was $5.40 per hour. Workers paid on an hourly basis earned their highest wages of the year during July, when the average rate was $4.91 per hour. Livestock workers received the highest wage rates of any nonsupervisor workers in the July, October, and January survey periods, but field workers received the highest nonsupervisor wage during the April survey period.

Farm Labor and Wage Rates, Mountain II Region,
July 1989, October 1989, January 1990, and April 1990 1/.

	July 9-15, 1989	October 8-14, 1989	January 7-13, 1990	April 8-14, 1990
		Workers on Farms (000) 2/		
Total	84	54	41	54
Self-employed	32	25	19	25
Unpaid	22	9	5	7
Hired	30	20	17	22
		Hours Worked per Worker 2/		
Self Employed	57.6	48.2	38.7	45.6
Unpaid Workers	36.4	33.7	33.1	31.4
Hired Workers	48.6	45.9	38.6	43.0
		Method of Pay - Dollars per Hour 2/		
Hourly	4.91	4.38	4.74	5.39
Piece Rate	3.25	3/	3/	3/
Other	4.11	5.07	5.85	5.36
All	4.47	4.79	5.40	5.40
		Type of Work - Dollars per Hour 2/		
Field Workers	4.03	4.21	4.90	5.28
Livestock Workers	4.81	4.50	5.16	4.93
Field & Livestock Workers	4.38	4.36	5.07	5.05
Supervisory	4.85	7.04	7.01	7.75
Other	3/	3/	3/	3/

1/ Mountain II Region includes Colo., Nev., and Utah. 2/ Excludes Agricultural Service Workers. 3/ Insufficient data.

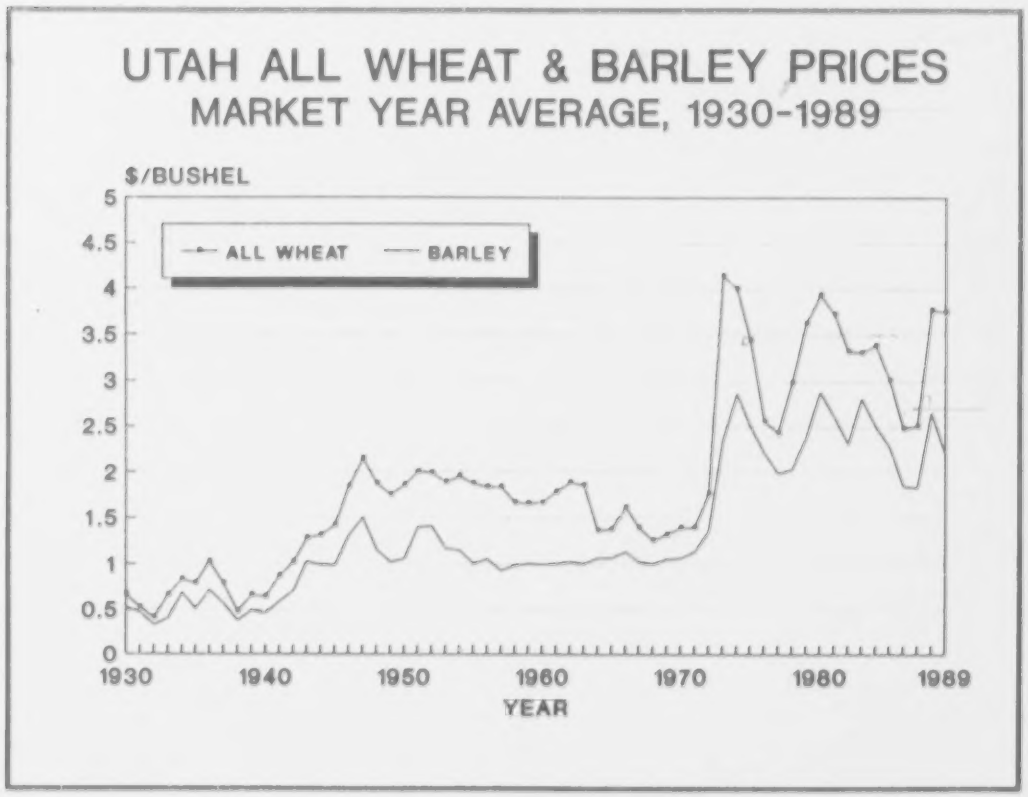
Agricultural Prices

The price data collected by the National Agricultural Statistics Service each year have a major impact on the farm industry. These prices are parts of a series, which determines deficiency payments, and are used to compute an Index of Prices Received by Farmers. This provides a single indicator of farm price trends at a given time.

Most prices after 1979 are based on actual sales by producers of a commodity during the entire month. Preliminary sales prices are obtained for the current month, based on sales around the 15th of the month. This "mid-month" price is revised the following month when sales data for the entire month become available. Livestock prices prior to 1980, and crop prices prior to 1977, are mid-month prices.

Hay prices are based on sales for the first half of the month and are not revised monthly. Wool prices are mid-month levels, and are revised annually. Prices for fluid and manufacturing grade milk are published only after data for the entire month are available. All other commodities, published on a monthly basis, follow the preliminary mid-month and revised entire month procedure outlined above. Many prices for Utah agricultural products are published only on an annual basis, because Utah produces a very small portion of the National total.

Yearly average prices for each commodity are weighted, based on the volume of sales of each commodity during a given month.



Average Prices Received by Farmers, Utah, Selected Years

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Mktg. Year Average
BARLEY (Dollars per Bushel) 1/													
1950..	1.09	1.07	1.13	1.08	1.08	1.11	1.18	1.12	1.14	1.11	1.11	1.18	1.16
1960..	1.02	1.00	1.00	1.00	1.00	1.02	.98	.98	.98	1.00	1.00	1.01	1.00
1970..	1.10	1.10	1.09	1.04	1.03	1.05	1.01	.98	.99	1.04	1.07	1.12	1.07
1980..	2.49	2.51	2.64	2.58	2.50	2.46	2.53	2.56	2.67	2.89	2.93	2.92	2.88
1983..	2.40	2.05	2.36	2.58	2.78	2.78	2.61	2.60	2.73	2.82	2.77	2.88	2.80
1984..	2.94	2.92	2.86	2.96	2.90	2.93	2.79	2.40	2.37	2.43	2.46	2.50	2.50
1985..	2.52	2.61	2.65	2.64	2.51	2.43	2.39	2.15	2.11	2.20	2.29	2.44	2.28
1986..	2.33	2.26	2.39	2.39	2.46	2.24	1.92	1.79	1.80	1.87	1.86	1.83	1.85
1987..	1.91	1.88	1.82	1.83	1.93	1.78	1.75	1.74	1.79	1.83	1.88	1.93	1.90
1988..	1.93	2.05	1.92	1.90	2.05	1.98	2.46	2.58	2.68	2.72	2.89	2.65	2.65
1989..	2.70	2.72	2.76	2.59	2.55	2.57	2.20	2.12	2.11	2.18	2.29	2.36	2.20
ALFALFA HAY, BALED (Dollars per Ton) 2/													
1950..	21.60	20.00	18.30	18.30	18.80	20.00	22.00	22.50	22.50	22.90	22.90	24.00	NA
1960..	27.00	27.50	26.50	26.50	26.70	26.70	26.40	26.40	27.00	27.00	28.00	28.50	NA
1970..	25.50	26.00	26.00	25.50	25.50	25.50	24.00	24.00	24.50	24.50	25.50	25.50	NA
1980..	65.00	73.00	71.00	69.00	60.50	71.50	73.50	69.50	70.00	75.00	74.00	76.00	NA
1983..	75.00	75.00	72.00	77.00	81.00	77.00	81.00	81.00	82.00	76.00	82.00	84.00	NA
1984..	83.00	82.00	84.00	88.00	86.00	83.00	73.00	71.00	72.00	72.00	74.00	75.00	NA
1985..	75.00	75.00	72.00	72.00	74.00	76.00	75.00	64.00	71.00	67.00	69.00	75.00	NA
1986..	71.00	78.00	70.00	76.00	73.00	71.00	66.00	64.00	62.00	61.00	65.00	63.00	NA
1987..	66.00	67.00	66.00	63.00	59.00	69.00	71.00	66.00	72.00	69.00	70.00	70.00	NA
1988..	74.00	74.00	75.00	74.00	74.00	75.00	75.00	76.00	77.00	79.00	77.00	77.00	NA
1989..	84.00	86.00	87.00	85.00	83.00	79.00	87.00	86.00	85.00	85.00	85.00	85.00	NA
ALL HAY, BALED (Dollars per Ton) 2/													
1950..	21.10	19.20	17.50	17.50	18.30	19.00	21.00	21.50	21.50	22.50	22.50	23.50	22.20
1960..	26.20	26.80	25.70	25.70	25.70	26.00	25.50	25.60	26.40	26.50	27.40	27.80	26.40
1970..	25.00	25.50	25.50	25.00	25.00	25.00	23.50	23.40	23.80	23.90	24.90	24.90	25.00
1980..	63.50	62.00	63.00	65.00	60.00	69.50	71.50	67.50	67.00	73.00	72.00	72.00	70.00
1983..	71.00	72.00	69.00	71.00	77.00	71.00	79.00	78.00	76.00	74.00	78.00	79.00	77.00
1984..	78.00	78.00	78.00	82.00	82.00	80.00	72.00	68.00	69.00	70.00	72.00	65.00	70.50
1985..	68.00	68.00	67.00	65.00	68.00	68.00	70.00	60.00	67.00	63.00	64.00	71.00	67.00
1986..	67.00	72.00	67.00	70.00	66.00	67.00	63.00	61.00	59.00	59.00	61.00	60.00	62.50
1987..	63.00	64.00	63.00	60.00	56.00	65.00	66.00	63.00	68.00	64.00	66.00	67.00	67.00
1988..	71.00	70.00	71.00	71.00	71.00	72.00	72.00	73.00	75.00	77.00	75.00	75.00	76.50
1989..	81.00	83.00	85.00	83.00	82.00	76.00	84.00	83.00	83.00	83.00	83.00	83.00	82.50

1/ Average price relates to mid-month average through 1976. Starting in 1977, it represents an average for the entire month. 2/ Mid-month average price.
NA-Not available.

Average Prices Received by Farmers, Utah, Selected Years

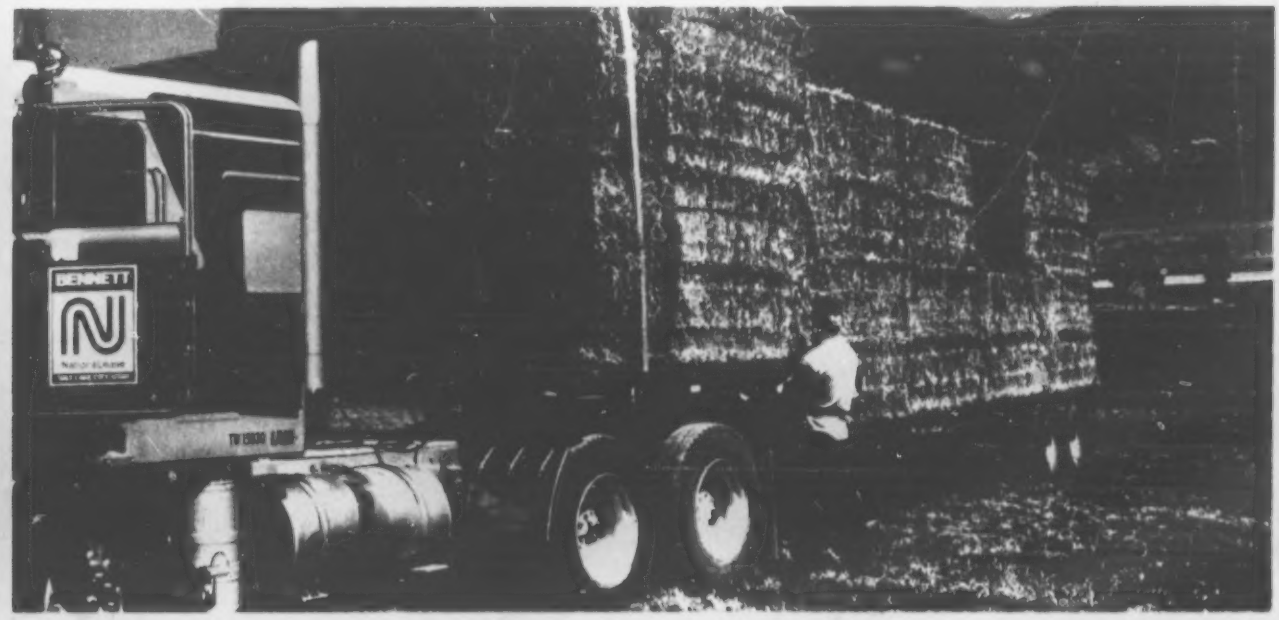
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Mktg. Year Average
						COWS (Dollars per Cwt.) 1/							
1960..	14.00	14.70	16.00	15.70	16.00	14.60	13.10	13.30	13.50	13.10	12.90	13.70	14.10
1970..	20.00	21.50	22.50	21.80	21.30	20.90	20.70	20.10	19.90	18.40	17.70	18.10	20.20
1980..	44.10	46.10	44.90	43.60	40.00	41.60	42.10	43.80	44.80	45.30	42.20	40.90	43.30
1983..	34.40	39.60	41.20	40.70	40.70	40.30	38.60	38.50	38.60	34.50	32.90	33.60	38.00
1984..	34.80	37.20	39.90	39.50	38.60	38.40	38.10	37.80	35.90	36.20	32.80	34.70	36.70
1985..	36.70	38.00	37.90	38.30	36.60	34.70	33.50	34.40	32.50	31.80	30.60	31.20	34.30
1986..	32.70	34.30	35.60	31.20	33.60	34.60	33.90	34.80	35.10	34.80	32.90	34.00	34.00
1987..	38.20	41.30	42.80	42.50	43.30	42.90	42.70	43.70	44.10	43.20	41.00	43.70	42.40
1988..	45.20	47.30	47.50	48.00	48.00	44.60	45.30	45.80	44.80	42.40	40.60	40.70	44.70
1989..	43.50	46.20	45.90	45.10	45.20	45.70	46.20	47.10	48.20	44.20	43.40	44.50	45.30
						STEERS & HEIFERS (Dollars per Cwt.) 1/							
1960..	20.50	21.10	22.30	22.40	22.70	21.30	20.60	19.70	19.70	18.80	18.80	20.30	20.60
1970..	27.50	28.70	31.50	28.80	29.00	29.00	28.50	26.80	26.90	26.70	26.90	25.80	27.90
1980..	70.10	70.60	68.10	62.60	61.70	63.00	65.20	65.30	64.70	64.90	63.70	62.70	65.20
1983..	55.50	60.00	61.60	60.80	58.70	57.80	53.90	52.30	49.70	49.90	51.90	55.50	57.10
1984..	63.50	63 10	63.60	63.60	61.80	62.10	62.10	60.40	58.50	56.80	58.40	61.10	60.80
1985..	61.30	61.70	57.50	56.70	56.30	55.50	50.80	49.80	50.20	56.20	59.60	57.90	56.00
1986..	56.00	53.90	54.10	52.10	52.50	51.00	55.50	57.20	56.50	56.00	58.00	58.40	55.20
1987..	57.70	60.90	62.00	64.90	66.80	66.50	63.50	64.10	64.30	63.80	64.00	63.80	63.50
1988..	64.20	66.90	68.70	70.70	70.70	67.30	64.70	67.00	67.60	70.60	68.20	69.40	68.40
1989..	74.10	74.00	74.40	72.90	71.50	70.00	72.50	71.90	69.20	71.40	72.70	74.90	72.30
						BEEF CATTLE (Dollars per Cwt.) 1/							
1960..	18.10	18.90	20.40	20.30	20.50	18.70	17.50	17.20	17.50	17.20	16.90	18.00	18.40
1970..	25.20	26.30	28.70	26.70	26.70	26.70	25.90	24.60	24.70	24.40	24.60	23.70	25.60
1980..	64.10	65.00	63.20	58.60	57.10	59.40	60.10	60.80	60.50	60.80	57.50	55.90	60.30
1983..	45.70	51.60	53.40	53.30	51.00	49.20	45.50	44.60	44.20	44.60	42.00	42.70	48.40
1984..	60.30	60.40	60.60	60.90	59.60	60.40	60.30	59.20	56.80	55.80	55.60	56.60	58.60
1985..	58.40	58.90	55.60	55.30	54.20	53.30	49.70	48.60	48.70	54.40	55.50	53.80	53.90
1986..	52.70	51.90	52.50	51.00	49.70	49.60	54.40	55.90	54.90	54.00	55.00	54.60	53.30
1987..	55.80	59.50	60.90	63.30	64.20	64.70	62.30	62.80	62.40	62.10	61.50	61.80	61.80
1988..	62.70	65.10	66.50	69.30	69.40	65.30	63.50	65.50	66.40	68.60	64.70	66.30	66.50
1989..	66.70	67.70	67.60	67.20	65.60	65.00	66.30	67.50	66.70	65.40	66.70	70.90	67.00

1/ Mid-month average price through 1979. Prices after 1979 are revised full month prices.

Average Prices Received by Farmers, Utah, Selected Years

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Mktg. Year Average
						CALVES (Dollars per Cwt.) 1/							
1960..	24.00	25.00	25.20	25.80	26.00	23.50	22.00	20.50	21.30	22.50	22.30	23.50	23.40
1970..	35.00	37.20	38.00	34.50	34.40	34.90	33.00	31.00	31.70	33.00	32.60	33.30	34.20
1980..	82.00	85.50	83.30	72.60	72.20	77.20	77.70	75.10	72.70	75.70	71.50	73.20	75.50
1983..	60.20	63.80	66.40	67.30	62.40	65.00	60.30	60.00	55.50	56.40	59.80	60.10	62.40
1984..	58.50	63.30	63.20	62.40	59.00	58.90	55.70	58.50	59.30	60.50	60.80	60.40	60.70
1985..	63.50	68.00	67.10	64.20	63.90	62.50	58.20	57.30	56.70	61.00	61.20	59.50	61.90
1986..	62.00	65.20	64.00	56.20	54.10	54.80	55.60	59.40	61.00	62.70	63.00	63.90	62.10
1987..	66.50	70.50	72.60	74.60	74.40	72.50	77.20	80.00	85.70	84.80	81.80	84.00	79.40
1988..	85.80	89.00	92.50	89.90	92.10	84.60	79.10	86.00	93.40	95.80	86.50	86.20	91.50
1989..	90.20	93.50	96.60	87.40	83.40	84.50	90.10	96.50	91.80	85.80	87.70	90.20	89.40
						MILK COWS (Dollars per Head) 2/3/							
1960..	220	220	220	225	225	235	225	225	215	205	205	215	220
1970..	320	320	330	330	330	330	325	315	310	320	340	320	324
1980..	1160	1190	1220	1220	1200	1200	1190	1210	1210	1220	1220	1220	1210
1983..	1050			1030			1030			950			1020
1984..	820			840			870			850			845
1985..	840			870			830			800			835
1986..	780			770			780			800			785
1987..	810			900			900			980			900
1988..	980			1050			1030			1000			1020
1989..	970			1040			1060			1060			1030

1/ Mid-month average price through 1979. Prices after 1979 are revised full month prices. 2/ Mid-month average price. 3/ Published only by quarters starting 1982.



Average Prices Received by Farmers, Utah, Selected Years

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Mktg. Year Average
MILK, ALL (Dollars per Cwt.) 1/													
1950..	4.00	3.90	3.65	3.50	3.30	3.30	3.35	3.60	3.75	4.00	4.15	4.15	3.69
1960..	4.25	4.15	4.05	3.95	3.85	3.80	3.80	3.95	4.20	4.25	4.35	4.40	4.07
1970..	5.70	5.55	5.40	5.45	5.35	5.20	5.20	5.30	5.55	5.65	5.80	5.80	5.48
1980..	12.40	12.30	12.30	12.20	12.10	12.20	12.00	12.10	12.70	13.00	13.30	13.50	12.50
1983..	13.20	13.00	12.90	12.90	12.70	12.40	12.30	12.40	12.80	13.20	13.30	13.40	12.90
1984..	13.40	13.10	12.80	12.60	12.40	12.20	12.20	12.50	12.90	13.50	13.80	13.70	12.90
1985..	13.50	13.20	13.00	12.50	12.00	11.30	11.10	11.20	11.60	11.90	12.10	12.30	12.00
1986..	12.10	11.80	11.40	11.60	11.30	11.20	11.10	11.40	12.00	12.60	12.80	12.70	11.80
1987..	12.70	12.30	12.00	11.70	11.40	11.40	11.40	11.70	12.10	12.00	12.20	12.30	11.90
1988..	12.10	11.80	11.50	11.20	10.80	10.50	10.80	11.20	11.90	12.40	12.60	13.00	11.60
1989..	12.70	12.40	11.80	11.40	11.30	11.40	11.60	12.30	13.20	13.70	14.50	15.00	12.60
MILK, ELIGIBLE FOR FLUID MARKET (Dollars per Cwt.) 1/ 2/													
1950..	4.90	4.85	4.55	4.25	4.15	4.15	4.20	4.60	4.80	5.05	5.15	5.20	4.64
1960..	4.75	4.70	4.60	4.50	4.35	4.30	4.30	4.45	4.70	4.75	4.85	4.85	4.59
1970..	6.10	5.90	5.75	5.90	5.75	5.60	5.60	5.70	5.95	6.05	6.25	6.25	5.90
1980..	12.70	12.50	12.50	12.40	12.30	12.40	12.20	12.40	12.90	13.30	13.60	13.90	12.70
1983..	13.50	13.30	13.20	13.30	13.00	12.80	12.60	12.80	13.30	13.50	13.60	13.60	13.20
1984..	13.60	13.30	13.00	13.00	12.80	12.50	12.60	12.80	13.20	13.70	14.10	14.00	13.20
1985..	13.90	13.60	13.30	12.80	12.20	11.50	11.30	11.40	11.70	12.00	12.20	12.40	12.20
1986..	12.20	11.90	11.60	11.80	11.50	11.30	11.30	11.60	12.20	12.80	13.00	12.90	12.00
1987..	12.90	12.50	12.20	11.90	11.60	11.60	11.60	11.90	12.50	12.30	12.40	12.50	12.10
1988..	12.40	12.10	11.70	11.50	11.00	10.70	11.00	11.40	12.00	12.50	12.80	13.20	11.80
1989..	12.90	12.70	12.10	11.60	11.50	11.60	11.80	12.50	13.30	13.90	14.70	15.20	12.80
MILK, MANUFACTURING GRADE (Dollars per Cwt.) 1/													
1950..	3.25	3.15	3.00	2.90	2.75	2.75	2.75	2.85	2.90	3.05	3.15	3.25	2.95
1960..	3.25	3.15	3.05	3.00	2.95	2.90	2.85	2.95	3.10	3.20	3.25	3.35	3.07
1970..	4.70	4.65	4.60	4.50	4.45	4.40	4.35	4.40	4.55	4.65	4.75	4.80	4.56
1980..	11.80	11.70	11.70	11.70	11.60	11.70	11.40	11.50	12.20	12.40	12.50	12.60	11.90
1983..	12.60	12.30	12.20	12.10	12.20	11.70	11.70	11.80	12.00	12.60	12.90	12.90	12.20
1984..	13.10	12.70	12.30	12.00	11.80	11.60	11.60	11.90	12.40	13.00	13.10	13.10	12.30
1985..	12.50	12.20	12.10	11.60	11.30	10.70	10.70	10.80	11.30	11.50	11.70	11.80	11.50
1986..	11.60	11.30	10.90	10.80	10.60	10.70	10.50	10.70	11.00	11.50	11.80	12.00	11.10
1987..	11.70	11.10	10.90	10.80	10.50	10.50	10.50	10.70	10.70	11.00	11.10	11.30	10.90
1988..	11.00	10.60	10.50	10.20	10.10	9.90	10.00	10.70	11.40	11.90	11.90	12.10	10.90
1989..	11.70	11.00	10.60	10.40	10.30	10.60	11.00	11.70	12.60	13.10	13.70	14.00	11.70

1/ Average for the month. 2/ Includes surplus diverted to manufacturing.

Average Prices Received by Farmers, Utah, Selected Years

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Mktg. Year Average
						SHEEP (Dollars per Cwt.) 1/							
1950..	8.60	8.60	9.30	9.50	9.00	8.50	9.00	9.00	11.00	11.50	12.00	12.50	10.60
1960..	6.50	7.00	7.00	7.00	6.50	6.50	5.50	5.00	4.50	4.80	4.50	5.00	5.30
1970..	7.60	7.60	7.70	8.20	7.50	8.30	8.50	8.00	7.50	6.50	6.00	6.00	7.10
1980..	17.80	16.40	21.90	16.90	14.60	15.50	16.60	16.30	15.90	14.90	15.10	14.40	16.50
1983..	17.30	22.50	20.00	18.00	16.40	11.70	12.90	14.00	14.50	12.00	11.40	14.00	14.50
1984..	14.60	17.20	14.80	14.80	13.70	13.20	13.40	14.30	14.60	11.50	14.20	20.50	14.10
1985..	21.00	19.30	19.90	25.10	17.20	16.00	16.70	19.10	22.40	16.30	16.60	21.90	18.50
1986..	23.60	28.30	27.00	20.50	16.50	17.00	19.90	21.50	24.10	17.40	21.10	26.10	21.30
1987..	23.30	22.40	24.50	20.40	17.50	18.80	17.90	21.70	24.10	21.20	20.80	22.80	21.40
1988..	28.00	24.70	24.80	19.00	17.40	18.50	20.70	19.70	17.00	19.20	19.80	25.30	20.00
1989..	30.20	35.00	27.40	17.80	13.50	15.40	16.30	19.90	15.90	15.70	20.30	27.80	19.20
						LAMBS (Dollars per Cwt.) 1/							
1950..	21.30	22.00	22.40	23.00	23.30	24.00	24.00	24.00	25.50	25.50	26.70	27.00	24.90
1960..	17.80	18.30	20.00	20.00	20.00	19.50	17.80	16.70	16.10	15.20	15.20	16.20	17.00
1970..	28.00	27.50	27.00	26.00	25.50	26.00	26.00	26.20	25.80	25.00	23.30	21.50	25.40
1980..	63.20	59.10	60.70	55.00	51.60	63.10	64.10	63.00	66.20	66.60	56.80	53.80	61.60
1983..	49.80	56.00	57.00	57.60	57.30	51.60	47.90	43.80	43.70	46.90	51.00	53.30	49.80
1984..	54.80	54.00	54.80	54.50	60.60	54.10	56.40	57.50	59.70	59.40	59.20	59.60	57.70
1985..	59.00	61.00	63.30	59.50	57.50	66.00	67.50	66.90	69.30	66.40	58.70	55.60	65.70
1986..	62.90	66.30	63.40	64.00	69.50	69.40	66.20	66.00	65.00	63.80	68.30	70.50	65.30
1987..	72.30	70.30	75.10	71.20	75.70	76.80	74.80	72.30	72.10	69.50	68.80	69.10	71.60
1988..	81.00	77.80	64.30	61.90	67.00	58.10	55.40	54.30	58.50	61.80	62.30	63.30	61.50.
1989..	62.00	60.20	64.70	59.60	64.30	65.50	63.00	62.80	62.70	57.40	53.30	55.00	60.50
						WOOL (Dollars per Pound) 2/							
1950..	.51	.51	.54	.54	.54	.57	.59	.61	.63	.66	.72	.80	.58
1960..	.44	.47	.42	.44	.44	.44	.39	.40	.36	.35	.37	.37	.39
1970..	.40	.35	.36	.36	.34	.37	.36	.33	.35	.32	.29	.26	.32
1980..	--	.84	.98	.90	.80	.83	.87	.98	.98	.93	.94	.96	.90
1983..	3/	.46	.50	.54	.55	.56	.57	.58	.64	.67	.63	.65	.57
1984..	.62	.60	.76	.85	.90	.89	.80	.87	.66	.89	.80	.71	.84
1985..	.59	.60	.59	.61	.62	.61	.62	.57	.59	.53	.61	.59	.61
1986..	.47	.62	.59	.66	.66	.68	.68	.66	.67	.64	.67	.67	.66
1987..	.41	.66	.78	.93	.98	.95	.94	.91	.88	.71	.61	.94	.93
1988..	.99	1.20	1.40	1.40	1.38	1.34	1.37	1.42	1.31	3/	.99	1.12	1.36
1989..	.87	1.21	1.24	1.31	1.34	1.30	1.32	1.30	1.30	1.56	.69	.67	1.30

1/ Mid-month average price through 1979. Prices after 1979 are revised full month prices. 2/ Average for the month. 3/ Insufficient sales.

County Estimates

County estimates add another dimension to agricultural estimates. State estimates provide data to compare production in the various areas within Utah. Crop county estimates play a major role in Federal Farm Program payments, and Crop Insurance settlements; thus, directly effecting many farmers and ranchers. A cooperative agreement between the Utah State Department of Agriculture and the Utah Agriculture Statistics Service, U.S.D.A., provides funding in support of the county estimates contained in this publication.

Box Elder is "number one" in total grain production, (wheat, barley, oats, and corn). Cache County is the second largest grain producer; followed by Utah, Millard, and Sanpete Counties.

Wheat production is dominated by Box Elder County; followed by Millard, Cache, Utah, and San Juan.

Corn is grown in all but three of Utah's counties. Utah and Box Elder Counties together account for 38 percent of planted acres. Box Elder leads in production of grain corn, followed by Utah, Millard, Davis, and Weber. Utah is first in silage production; followed by Box Elder, Cache, Weber, and Sevier.

Box Elder leads all counties in 1989 for barley production. Cache County was second, followed by Millard, Utah, Sanpete, and Sevier Counties. Duchesne led in oats production; followed by Cache, Box Elder, Uintah, Emery, and Utah.

Millard County is first in alfalfa hay production, followed by Cache, Iron, Box Elder, Sanpete, and Utah Counties.

Cache County continues as the "number one" dairy county, with over twice the number of milk cows as Box Elder which ranked in second place. Utah County was third, followed by Weber and Sanpete Counties. Box Elder is "number one" in beef cows; followed by Rich, Duchesne, Uintah, Millard, and Utah Counties.

Sheep are found in all counties, but Sanpete County has the most. Iron County is second, followed by Utah, Summit, and Box Elder Counties.

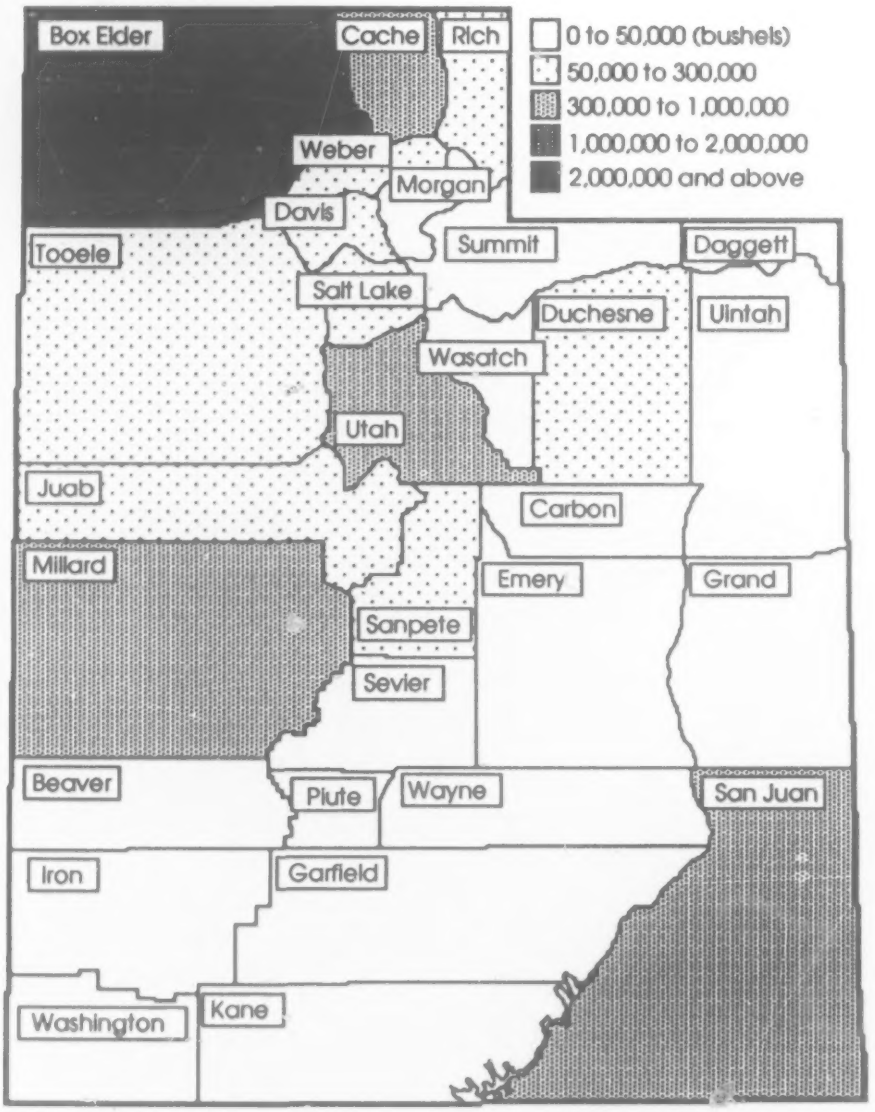
Sanpete County topped all counties for total cash receipts from agricultural commodities in 1988. Cache County is second, followed by Utah, Box Elder and Millard.

County Estimates for All Wheat--1989

County	Acres Planted	Acres Harvested For Grain	Yield Per Harvested Acre	Production
			Bushels	Bushels
NORTHERN				
Box Elder	68,400	64,800	37.2	2,410,000
Cache	17,800	16,200	34.0	551,000
Davis	3,500	3,400	67.9	231,000
Morgan	900	800	38.1	30,500
Rich	4,000	3,700	21.6	80,000
Salt Lake	10,300	9,800	22.2	218,000
Tooele	3,100	3,100	31.0	96,000
Weber	4,000	3,700	76.1	281,500
Total	112,000	105,500	36.9	3,898,000
CENTRAL				
Juab	7,900	7,500	25.9	194,500
Millard	13,500	12,400	45.6	566,000
Sanpete	2,300	2,100	55.0	115,500
Sevier	800	800	60.6	48,500
Utah	19,500	17,700	23.8	421,500
Total	44,400	40,500	33.2	1,346,000
EASTERN				
Carbon	*	*	*	*
Daggett	*	*	*	*
Duchesne	1,300	1,200	60.0	72,000
Emery	900	700	50.7	35,500
Grand	*	*	*	*
San Juan	26,600	24,700	16.8	415,100
Summit	*	*	*	*
Uintah	1,200	1,000	26.9	26,900
Wasatch	*	*	*	*
Other	1,000	900	49.4	44,500
Total	31,000	28,500	20.8	594,000
SOUTHERN				
Beaver	*	*	*	*
Garfield	*	*	*	*
Iron	800	700	62.3	43,600
Kane	*	*	*	*
Piute	*	*	*	*
Washington	1,500	1,200	28.3	34,000
Wayne	*	*	*	*
Other	700	600	57.3	34,400
Total	3,000	2,500	44.8	112,000
STATE	190,000	177,000	33.6	5,950,000

*Less than 500 planted acres, combined with other counties.

Utah All Wheat Production
By Counties, 1989



All Wheat by Cropping Practice by County--1989 Crop

County and District	Irrigated				Not Irrigated			
	Acreage		Harvested Yield	Production	Acreage		Harvested Yield	Production
	Planted	Harvested			Planted	Harvested		
	Acres		Bushels		Acres		Bushels	
NORTHERN								
Box Elder.....	19,400	18,500	82.3	1,522,500	49,000	46,300	19.2	887,500
Cache.....	5,600	5,000	64.0	320,000	12,200	11,200	20.6	231,000
Davis.....	2,800	2,700	81.1	219,000	700	700	17.1	12,000
Morgan.....	300	300	68.3	20,500	600	500	20.0	10,000
Rich.....	400	400	70.0	28,000	3,600	3,300	15.8	52,000
Salt Lake.....	1,300	1,200	64.2	77,000	9,000	8,600	16.4	141,000
Tooele.....	1,500	1,500	51.0	76,500	1,600	1,600	12.2	19,500
Weber.....	3,800	3,500	79.0	276,500	200	200	25.0	5,000
Total.....	35,100	33,100	76.7	2,540,000	76,900	72,400	18.8	1,358,000
CENTRAL								
Juab.....	2,400	2,300	57.4	132,000	5,500	5,200	12.0	62,500
Millard.....	7,100	6,600	75.5	498,500	6,400	5,800	11.6	67,500
Sanpete.....	2,200	2,100	55.0	115,500	100	0	*	*
Sevier.....	700	700	66.4	46,500	100	100	20.0	2,000
Utah.....	3,400	3,000	82.5	247,500	16,100	14,700	11.8	174,000
Total.....	15,800	14,700	70.7	1,040,000	28,200	25,800	11.9	306,000
EASTERN								
Carbon.....	*	*	*	*	*	*	*	*
Daggett.....	*	*	*	*	*	*	*	0
Duchesne.....	1,300	1,200	60.0	72,000	0	0	*	0
Emery.....	900	700	50.7	35,500	0	0	*	0
Grand.....	*	*	*	*	*	*	*	*
San Juan.....	400	300	62.7	18,800	26,200	24,400	16.2	396,300
Summit.....	*	*	*	*	*	*	*	*
Uintah.....	600	500	40.8	20,400	600	500	13.0	6,500
Wasatch.....	*	*	*	*	*	*	*	*
Other.....	800	800	52.9	42,300	200	100	22.0	2,200
Total.....	4,000	3,500	54.0	189,000	27,000	25,000	16.2	405,000
SOUTHERN								
Beaver.....	*	*	*	*	*	*	*	*
Garfield.....	*	*	*	*	*	*	*	*
Iron.....	600	600	67.7	40,600	200	100	30.0	3,000
Kane.....	*	*	*	*	*	*	*	*
Piute.....	*	*	*	*	*	*	*	*
Washington.....	400	400	55.0	22,000	1,100	800	15.0	12,000
Wayne.....	*	*	*	*	*	*	*	*
Other.....	600	600	57.3	34,400	100	0	*	*
Total.....	1,600	1,600	60.6	97,000	1,400	900	16.7	15,000
STATE.....	56,500	52,900	73.1	3,866,000	133,500	124,100	16.8	2,084,000

*Less than 500 acres planted for all cropping practices, combined with other counties.

County Estimates for Winter Wheat--1989

County	Acres Planted	Acres Harvested For Grain	Yield Per Harvested Acre	Production
			Bushels	Bushels
NORTHERN				
Box Elder	64,200	61,000	36.7	2,240,000
Cache	13,500	12,500	32.8	410,000
Davis	2,500	2,500	67.2	168,000
Morgan	300	300	45.0	13,500
Rich	3,200	3,000	20.0	60,000
Salt Lake	8,900	8,500	20.0	170,000
Tooele	2,400	2,400	27.1	65,000
Weber	3,000	2,800	79.1	221,500
Total	98,000	93,000	36.0	3,348,000
CENTRAL				
Juab	7,300	7,000	25.1	176,000
Millard	11,400	10,600	42.0	445,000
Sanpete	700	600	71.7	43,000
Sevier	600	600	65.0	39,000
Utah	17,500	16,200	21.4	347,000
Total	37,500	35,000	30.0	1,050,000
EASTERN				
Carbon	*	*	*	*
Daggett	*	*	*	*
Duchesne	400	400	70.0	28,000
Emery	300	300	61.7	18,500
Grand	*	*	*	*
San Juan	25,800	23,900	16.9	403,000
Summit	*	*	*	*
Uintah	100	100	64.0	6,400
Wasatch	*	*	*	*
Other	400	300	67.0	20,100
Total	27,000	25,000	19.0	476,000
SOUTHERN				
Beaver	*	*	*	*
Garfield	*	*	*	*
Iron	600	500	68.0	34,000
Kane	*	0	*	*
Piute	*	0	*	*
Washington	1,500	1,200	28.3	34,000
Wayne	*	*	*	*
Other	400	300	60.0	18,000
Total	2,500	2,000	43.0	86,000
STATE	165,000	155,000	32.0	4,960,000

*Less than 500 planted acres of all wheat, combined with other counties.

County Estimates for Spring Wheat--1989

County	Acres Planted	Acres Harvested For Grain	Yield Per Harvested Acre	Production
			Bushels	Bushels
NORTHERN				
Box Elder	4,200	3,800	44.7	170,000
Cache	4,300	3,700	38.1	141,000
Davis	1,000	900	70.0	63,000
Morgan	600	500	34.0	17,000
Rich	800	700	28.6	20,000
Salt Lake	1,400	1,300	36.9	48,000
Tooele	700	700	44.3	31,000
Weber	1,000	900	66.7	60,000
Total	14,000	12,500	44.0	550,000
CENTRAL				
Juab	600	500	37.0	18,500
Millard	2,100	1,800	67.2	121,000
Sanpete	1,600	1,500	48.3	72,500
Sevier	200	200	47.5	9,500
Utah	2,000	1,500	49.7	74,500
Total	6,500	5,500	53.8	296,000
EASTERN				
Carbon	*	*	*	*
Daggett	*	*	*	*
Duchesne	900	800	55.0	44,000
Emery	600	400	42.5	17,000
Grand	*	*	*	*
San Juan	800	800	15.1	12,100
Summit	*	*	*	*
Uintah	1,100	900	22.8	20,500
Wasatch	*	*	*	*
Other	600	600	40.7	24,400
Total	4,000	3,500	33.7	118,000
SOUTHERN				
Beaver	*	*	*	*
Garfield	*	*	*	*
Iron	200	200	48.0	9,600
Kane	*	*	*	*
Piute	*	*	*	*
Washington	*	*	*	*
Wayne	*	*	*	*
Other	300	300	54.7	16,400
Total	500	500	52.0	26,000
STATE	25,000	22,000	45.0	990,000

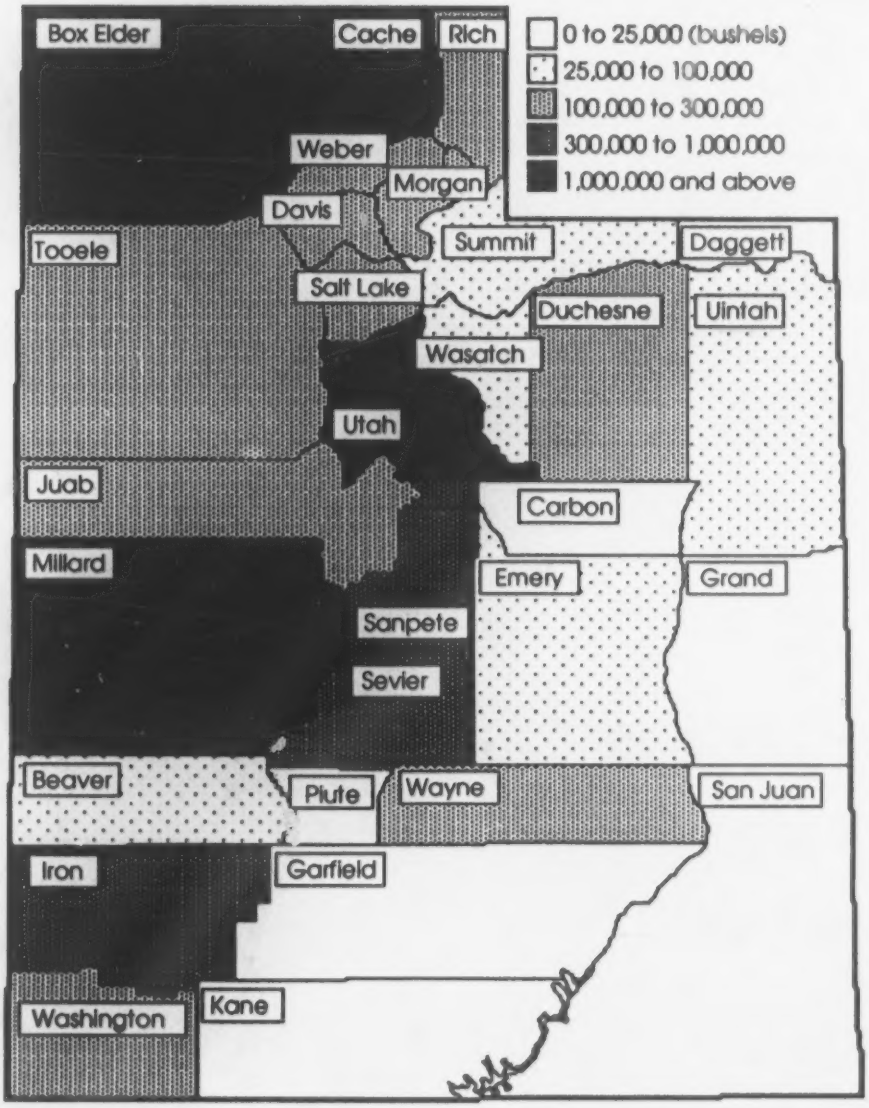
*Less than 500 planted acres of all wheat, combined with other counties.

County Estimates for Barley--1989

County	Acres Planted	Acres Harvested For Grain	Yield Per Harvested Acre	Production
			- - - - Bushels - - - -	
NORTHERN				
Box Elder.....	26,000	23,000	78.8	1,813,000
Cache.....	25,800	22,400	70.7	1,584,000
Davis.....	2,000	1,800	86.1	155,000
Morgan.....	1,700	1,500	74.7	112,000
Rich.....	2,200	1,900	55.8	106,000
Salt Lake.....	2,200	2,000	75.0	150,000
Tooele.....	2,400	2,200	81.8	180,000
Weber.....	3,700	3,200	78.1	250,000
Total.....	66,000	58,000	75.0	4,350,000
CENTRAL				
Juab.....	3,200	2,800	68.2	191,000
Millard.....	16,800	13,500	87.4	1,180,000
Sanpete.....	7,900	6,800	79.4	540,000
Sevier.....	6,100	5,200	83.5	434,000
Utah.....	15,000	12,700	89.8	1,140,000
Total.....	49,000	41,000	85.0	3,485,000
EASTERN				
Carbon.....	*	*	*	*
Daggett.....	*	*	*	*
Duchesne.....	3,200	2,800	78.4	219,500
Emery.....	900	800	55.0	44,000
Grand.....	*	*	*	*
San Juan.....	700	600	40.0	24,000
Summit.....	800	600	81.7	49,000
Uintah.....	1,200	1,100	67.3	74,000
Wasatch.....	1,100	1,000	65.5	65,500
Other.....	100	100	70.0	7,000
Total.....	8,000	7,000	69.0	483,000
SOUTHERN				
Beaver.....	1,500	1,200	78.0	93,600
Garfield.....	*	*	*	*
Iron.....	4,700	3,500	91.0	318,500
Kane.....	*	*	*	*
Piute.....	*	*	*	*
Washington.....	2,300	1,600	82.8	132,400
Wayne.....	1,600	1,100	90.9	100,000
Other.....	900	600	72.5	43,500
Total.....	11,000	8,000	86.0	688,000
STATE.....	134,000	114,000	79.0	9,006,000

*Less than 500 planted acres, combined with other counties.

Utah Barley Production
By Counties, 1989



All Barley by Cropping Practice by County--1989 Crop

County and District	Irrigated				Not Irrigated			
	Acreage		Harvested Yield	Production	Acreage		Harvested Yield	Production
	Planted	Harvested			Planted	Harvested		
	- - - Acres - - -		- - - Bushels - - -		- - - Acres - - -		- - - Bushels - - -	
NORTHERN								
Box Elder.....	21,000	19,000	89.7	1,705,000	5,000	4,000	27.0	108,000
Cache.....	21,000	18,900	78.5	1,484,500	4,800	3,500	28.4	99,500
Davis.....	1,800	1,700	89.4	152,000	200	100	30.0	3,000
Morgan.....	1,600	1,400	78.2	109,500	100	100	25.0	2,500
Rich.....	1,900	1,700	59.4	101,000	300	200	25.0	5,000
Salt Lake.....	2,000	1,900	77.6	147,500	200	100	25.0	2,500
Tooele.....	2,100	1,900	91.1	173,000	300	300	23.3	7,000
Weber.....	3,600	3,100	79.5	246,500	100	100	35.0	3,500
Total.....	55,000	49,600	83.0	4,119,000	11,000	8,400	27.5	231,000
CENTRAL								
Juab.....	3,000	2,700	70.4	190,000	200	100	10.0	1,000
Millard.....	16,700	13,400	87.9	1,178,000	100	100	20.0	2,000
Sanpete.....	7,900	6,800	79.4	540,000	0	0		0
Sevier.....	6,000	5,100	84.5	431,000	100	100	30.0	3,000
Utah.....	14,400	12,200	92.6	1,130,000	600	500	20.0	10,000
Total.....	48,000	40,200	86.3	3,469,000	1,000	800	20.0	16,000
EASTERN								
Carbon.....	*	*	*	*	*	*	*	*
Daggett.....	*	*	*	*	*	*	*	*
Duchesne.....	3,100	2,700	79.6	215,000	100	100	40.0	4,000
Emery.....	900	800	55.0	44,000	0	0		0
Grand.....	*	*	*	*	*	*	*	*
San Juan.....	200	200	72.5	14,500	500	400	25.0	10,000
Summit.....	700	500	90.0	45,000	100	100	40.0	4,000
Uintah.....	1,200	1,100	67.3	74,000	0	0		0
Wasatch.....	1,100	1,000	65.5	65,500	0	0		0
Other.....	100	100	70.0	7,000	0	0		0
Total.....	7,300	6,400	72.7	465,000	700	600	30.0	18,000
SOUTHERN								
Beaver.....	1,500	1,200	78.0	93,600	0	0		0
Garfield.....	*	*	*	*	*	*	*	*
Iron.....	4,700	3,500	91.0	318,500	0	0		0
Kane.....	*	*	*	*	*	*	*	*
Piute.....	*	*	*	*	*	*	*	*
Washington.....	2,000	1,400	91.0	127,400	300	200	25.0	5,000
Wayne.....	1,600	1,100	90.9	100,000	0	0		0
Other.....	900	600	72.5	43,500	0	0		0
Total.....	10,700	7,800	87.6	683,000	300	200	25.0	5,000
STATE.....	121,000	104,000	84.0	8,736,000	13,000	10,000	27.0	270,000

*Less than 500 acres planted for all cropping practices combined with other counties.

County Estimates for Corn--1989.

County	Acres Planted All Purposes	Corn for Grain			Corn for Silage		
		Acres Harvested	Yield	Production	Acres Harvested	Yield	Production
		Bushels	Bushels		Tons	Tons	
NORTHERN							
Box Elder	12,800	5,900	142.0	838,000	6,700	21.0	141,000
Cache	6,300	500	126.0	63,000	5,800	18.7	108,500
Davis	4,600	2,200	138.2	304,000	2,400	21.7	52,000
Morgan	*	*	*	*	*	*	*
Rich	*	*	*	*	*	*	*
Salt Lake	1,300	400	140.0	56,000	800	20.0	16,000
Tooele	*	*	*	*	*	*	*
Weber	5,300	1,000	139.0	139,000	4,200	20.2	85,000
Other	700	0	.0	0	700	18.6	13,000
Total	31,000	10,000	140.0	1,400,000	20,600	20.2	415,500
CENTRAL							
Juab	600	100	120.0	12,000	400	15.5	6,200
Millard	5,000	3,100	131.0	406,000	1,800	18.9	34,000
Sanpete	1,400	0	.0	0	1,400	17.9	25,000
Sevier	4,900	400	125.0	50,000	4,500	18.4	82,800
Utah	12,100	4,000	130.0	520,000	8,100	18.5	150,000
Total	24,000	7,600	130.0	988,000	16,200	18.4	298,000
EASTERN							
Carbon	*	*	*	*	*	*	*
Daggett	*	*	*	*	*	*	*
Duchesne	1,800	700	110.0	77,000	1,000	17.2	17,200
Emery	1,100	300	113.3	34,000	700	17.4	12,200
Grand	*	*	*	*	*	*	*
San Juan	*	*	*	*	*	*	*
Summit	*	*	*	*	*	*	*
Uintah	3,100	700	97.1	68,000	2,300	16.7	38,300
Wasatch	*	*	*	*	*	*	*
Other	1,000	400	103.8	41,500	600	17.2	10,300
Total	7,000	2,100	105.0	220,500	4,600	17.0	78,000
SOUTHERN							
Beaver	1,300	200	105.0	21,000	1,100	17.7	19,500
Garfield	*	*	*	*	*	*	*
Iron	1,000	100	105.0	10,500	800	17.1	13,700
Kane	*	*	*	*	*	*	*
Piute	*	*	*	*	*	*	*
Washington	*	*	*	*	*	*	*
Wayne	*	*	*	*	*	*	*
Other	700	0	.0	0	700	16.1	11,300
Total	3,000	300	105.0	31,500	2,600	17.1	44,500
STATE	65,000	20,000	132.0	2,640,000	44,000	19.0	836,000

*Less then 500 acres planted for all purposes, combined with other counties.

County Estimates for Oats--1989

County	Acres Planted	Acres Harvested For Grain	Yield Per Harvested Acre	Production
			Bushels	Bushels
NORTHERN				
Box Elder	1,600	1,100	83.6	92,000
Cache	2,300	1,500	82.0	123,000
Davis	*	*	*	*
Morgan	*	*	*	*
Rich	*	*	*	*
Salt Lake	600	400	76.8	30,700
Tooele	600	300	64.0	19,200
Weber	900	500	95.0	47,500
Other	1,000	700	79.4	55,600
Total	7,000	4,500	81.8	368,000
CENTRAL				
Juab	500	300	62.7	18,800
Millard	2,300	900	69.4	62,500
Sanpete	1,900	800	64.8	51,800
Sevier	1,700	600	75.2	45,100
Utah	2,100	900	73.1	65,800
Total	8,500	3,500	69.7	244,000
EASTERN				
Carbon	600	300	95.0	28,500
Daggett	*	*	*	*
Duchesne	3,100	1,600	82.5	132,000
Emery	1,700	1,100	67.3	74,000
Grand	*	*	*	*
San Juan	1,200	1,000	34.0	34,000
Summit	600	300	70.0	21,000
Uintah	1,800	1,200	65.0	78,000
Wasatch	600	200	97.5	19,500
Other	400	300	63.3	19,000
Total	10,000	6,000	67.7	406,000
SOUTHERN				
Beaver	2,500	500	79.0	39,500
Garfield	1,900	600	81.7	49,000
Iron	2,200	500	88.6	44,300
Kane	500	200	62.0	12,400
Piute	900	300	82.0	24,600
Washington	800	200	71.0	14,200
Wayne	1,700	700	80.0	56,000
Total	10,500	3,000	80.0	240,000
STATE	36,000	17,000	74.0	1,258,000

* Less than 500 planted acres, combined with other counties.

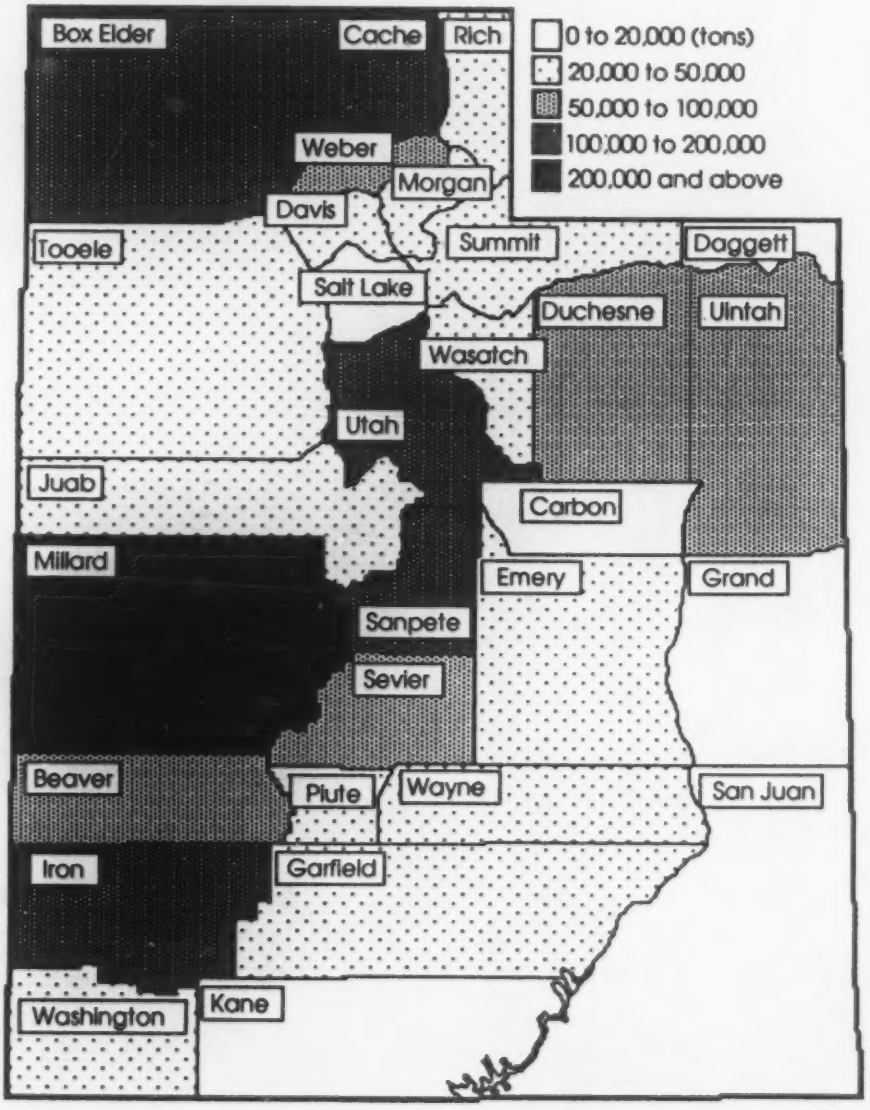
County Estimates for All Hay--1989.

County	Acres Harvested	Yield per Acre	Production
		Tons	
NORTHERN			
Box Elder	45,900	3.31	152,000
Cache	54,100	3.20	173,000
Davis	8,600	3.74	32,200
Morgan	9,000	3.10	27,900
Rich	42,500	1.78	75,700
Salt Lake	9,400	4.03	37,900
Tooele	13,400	3.34	44,800
Weber	17,100	3.83	65,500
Total	200,000	3.05	609,000
CENTRAL			
Juab	13,600	2.99	40,700
Millard	56,500	3.99	225,400
Sanpete	37,800	3.41	129,000
Sevier	22,200	4.09	90,900
Utah	33,900	3.78	128,000
Total	164,000	3.74	614,000
EASTERN			
Carbon	4,700	2.91	13,700
Daggett	4,100	1.90	7,800
Duchesne	41,500	2.67	110,800
Emery	14,000	2.94	41,100
Grand	1,600	3.50	5,600
San Juan	8,300	2.11	17,500
Summit	16,900	2.31	39,100
Uintah	27,800	3.35	93,000
Wasatch	9,100	3.18	28,900
Total	128,000	2.79	357,500
SOUTHERN			
Beaver	26,200	3.89	102,000
Garfield	11,600	2.90	33,600
Iron	37,400	4.31	161,200
Kane	3,000	3.20	9,600
Piute	10,500	2.82	29,600
Washington	7,900	4.18	33,000
Wayne	11,400	3.20	36,500
Total	108,000	3.75	405,500
STATE	600,000	3.31	1,986,000

County Estimates for Alfalfa Hay--1989.

County	Acres Harvested	Yield per Acre	Production
		Tons	
NORTHERN			
Box Elder	38,500	3.64	140,000
Cache	46,500	3.42	159,000
Davis	6,700	4.10	27,500
Morgan	7,200	3.33	24,000
Rich	9,500	3.11	29,500
Salt Lake	8,000	4.25	34,000
Tooele	11,000	3.64	40,000
Weber	14,600	4.04	59,000
Total	142,000	3.61	513,000
CENTRAL			
Juab	11,800	3.14	37,000
Millard	53,000	4.11	218,000
Sanpete	28,700	3.83	110,000
Sevier	20,000	4.30	86,000
Utah	25,500	4.31	110,000
Total	139,000	4.04	561,000
EASTERN			
Carbon	4,200	3.02	12,700
Daggett	1,500	2.53	3,800
Duchesne	27,500	3.05	83,800
Emery	12,000	3.05	36,600
Grand	1,400	3.71	5,200
San Juan	7,500	2.13	16,000
Summit	9,800	2.61	25,600
Uintah	24,000	3.58	86,000
Wasatch	7,100	3.42	24,300
Total	95,000	3.09	294,000
SOUTHERN			
Beaver	23,000	4.10	94,300
Garfield	9,300	3.00	27,900
Iron	35,000	4.40	154,000
Kane	2,300	3.52	8,100
Piute	7,700	3.09	23,800
Washington	6,500	4.52	29,400
Wayne	10,200	3.28	33,500
Total	94,000	3.95	371,000
STATE	470,000	3.70	1,739,000

Utah Alfalfa Hay Production
By Counties, 1989



County Estimates for Other Hay--1989.

County	Acres Harvested	Yield per Acre	Production
		- - - - - Tons - - - - -	
NORTHERN			
Box Elder	7,400	1.62	12,000
Cache	7,600	1.84	14,000
Davis	1,900	2.47	4,700
Morgan	1,800	2.17	3,900
Rich	33,000	1.40	46,200
Salt Lake	1,400	2.79	3,900
Tooele	2,400	2.00	4,800
Weber	2,500	2.60	6,500
Total	58,000	1.66	96,000
CENTRAL			
Juab	1,800	2.06	3,700
Millard	3,500	2.11	7,400
Sanpete	9,100	2.09	19,000
Sevier	2,200	2.23	4,900
Utah	8,400	2.14	18,000
Total	25,000	2.12	53,000
EASTERN			
Carbon	500	2.00	1,000
Daggett	2,600	1.54	4,000
Duchesne	14,000	1.93	27,000
Emery	2,000	2.25	4,500
Grand	200	2.00	400
San Juan	800	1.88	1,500
Summit	7,100	1.90	13,500
Uintah	3,800	1.84	7,000
Wasatch	2,000	2.30	4,600
Total	33,000	1.92	63,500
SOUTHERN			
Beaver	3,200	2.41	7,700
Garfield	2,300	2.48	5,700
Iron	2,400	3.00	7,200
Kane	700	2.14	1,500
Piute	2,800	2.07	5,800
Washington	1,400	2.57	3,600
Wayne	1,200	2.50	3,000
Total	14,000	2.46	34,500
STATE	130,000	1.90	247,000

County Estimates for Potatoes--1988-1989

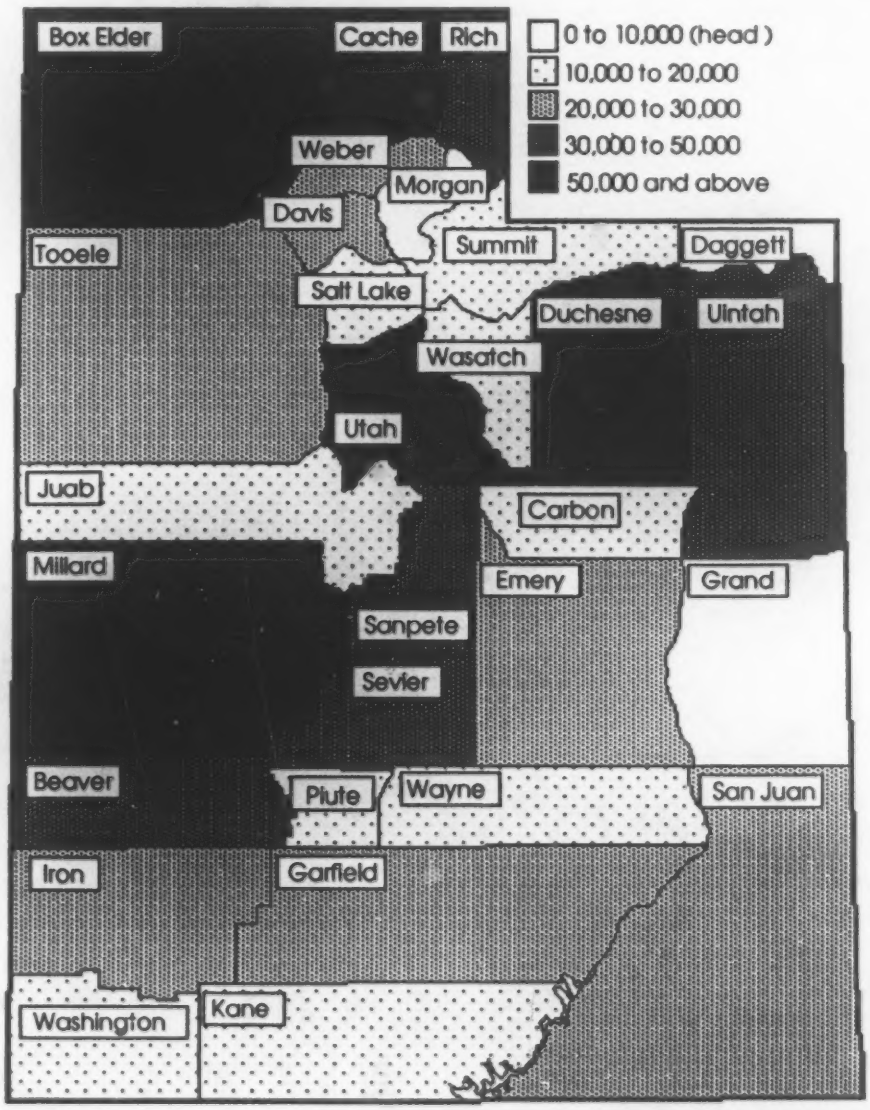
County	Acres Harvested		Yield per Acre		Production	
	1988	1989	1988	1989	1988	1989
			- - Cwt. - -		- - - - - Cwt. - - - - -	
Davis.....	800	900	310	298	248,000	268,000
Millard.....	1,200	1,100	283	300	340,000	330,000
Iron & Washington.....	4,300	3,900	225	220	969,000	859,000
Other Counties.....	300	200	200	190	60,000	38,000
STATE TOTAL.....	6,600	6,100	245	245	1,617,000	1,495,000

County Estimates for Cattle - January 1, 1989-90

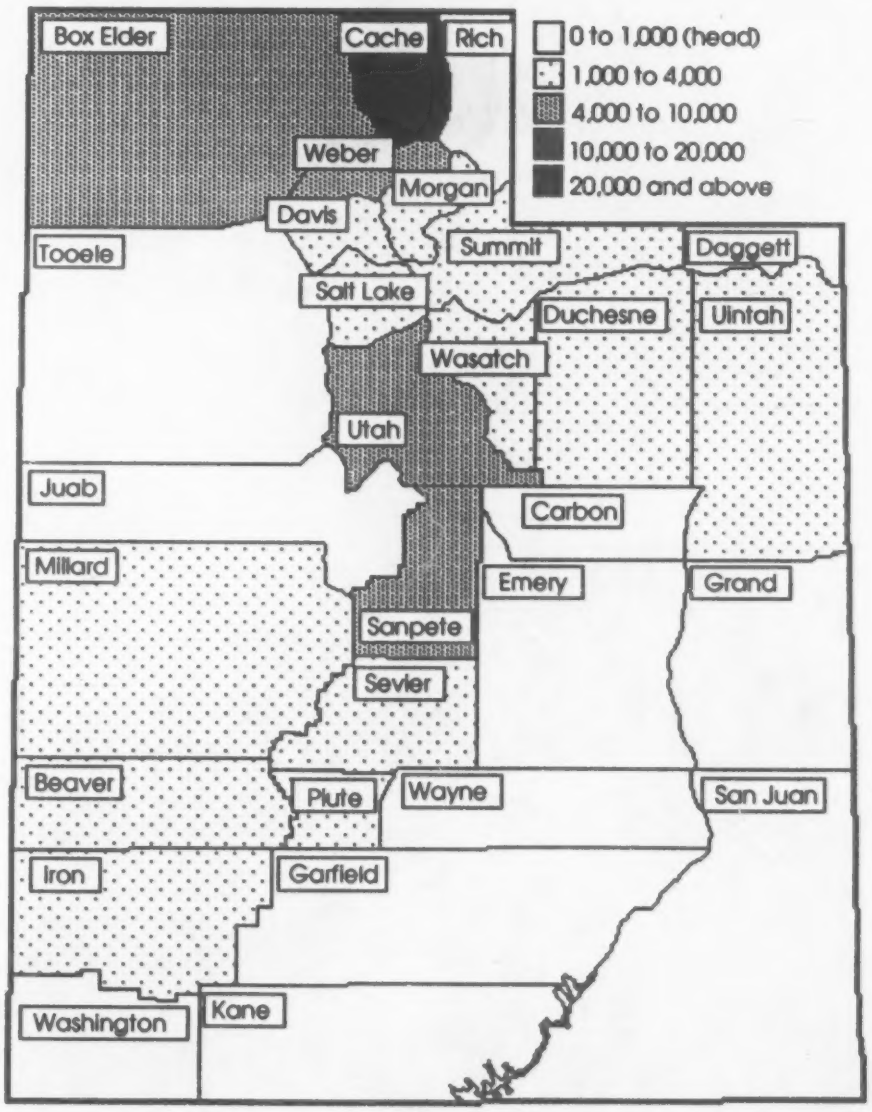
County	All Cattle		All Cows		Beef Cows		Milk Cows	
	1989	1990	1989	1990	1989	1988	1989	1990
NORTHERN								
Box Elder	79,000	76,000	40,000	39,000	31,000	30,000	9,000	9,000
Cache	66,000	66,000	25,700	27,400	6,500	6,000	19,200	21,400
Davis	22,000	20,000	6,700	6,600	5,500	5,000	1,200	1,600
Morgan	9,000	9,000	4,400	4,500	3,000	3,000	1,400	1,500
Rich	46,000	45,000	1/ 28,000	1/ 28,000	28,000	28,000	2/	2/
Salt Lake	13,000	12,000	6,800	5,500	5,000	4,000	1,800	1,500
Tooele	23,000	21,000	1/ 17,000	1/ 16,000	17,000	16,000	2/	2/
Weber	28,000	26,000	11,600	10,800	5,000	4,000	6,600	6,800
Total	286,000	275,0000	140,200	137,800	101,000	96,000	39,200	41,800
CENTRAL								
Juab	15,000	13,000	1/ 9,000	1/ 9,000	9,000	9,000	2/	2/
Millard	63,000	59,000	20,700	21,000	18,000	18,000	2,700	3,000
Sanpete	47,000	44,000	22,700	22,000	17,000	16,000	5,700	6,000
Sevier	42,000	39,000	16,100	16,300	13,000	13,000	3,100	3,300
Utah	54,000	50,000	25,500	25,500	18,000	17,000	7,500	8,500
Total	221,000	205,000	94,000	93,800	75,000	73,000	19,000	20,800
EASTERN								
Carbon	11,000	10,000	1/ 7,500	1/ 7,000	7,500	7,000	2/	2/
Daggett	4,000	4,000	1/ 2,500	1/ 2,000	2,500	2,000	2/	2/
Duchesne	52,000	52,000	30,000	29,300	27,000	26,000	3,000	3,300
Emery	24,000	25,000	13,600	13,700	13,000	13,000	600	700
Grand	6,000	5,000	1/ 3,500	1/ 3,000	3,500	3,000	2/	2/
San Juan	22,000	21,000	1/ 13,000	1/ 12,000	13,000	12,000	2/	2/
Summit	19,000	19,000	10,500	11,000	8,500	9,000	2,000	2,000
Uintah	45,000	44,000	26,000	26,400	25,000	25,000	1,000	1,400
Wasatch	11,000	11,000	5,200	5,500	3,000	3,000	2,200	2,500
Total	194,000	191,000	111,800	109,900	103,000	100,000	8,800	9,900
SOUTHERN								
Beaver	29,000	30,000	13,600	14,100	11,000	11,000	2,600	3,100
Garfield	20,000	20,000	1/ 12,000	1/ 11,000	12,000	11,000	2/	2/
Iron	20,000	20,000	11,000	11,200	10,000	10,000	1,000	1,200
Kane	12,000	10,000	1/ 5,500	1/ 5,000	5,500	5,000	2/	2/
Piute	12,000	12,000	7,100	7,300	6,000	6,000	1,100	1,300
Washington	18,000	19,000	1/ 10,000	1/ 10,000	10,000	10,000	2/	2/
Wayne	18,000	18,000	11,400	11,800	10,500	11,000	900	800
Total	129,000	129,000	70,600	70,400	65,000	64,000	5,600	6,400
Counties with less than 500 head			1,400	1,100			1,400	1,100
State	830,000	800,000	418,000	413,000	344,000	333,000	74,000	80,000

1/ Milk cows excluded from county total, but included in total of counties with less than 500 milk cows. 2/ Included in total of counties with less than 500 milk cows.

Utah All Cattle Inventory
By Counties, January 1, 1990



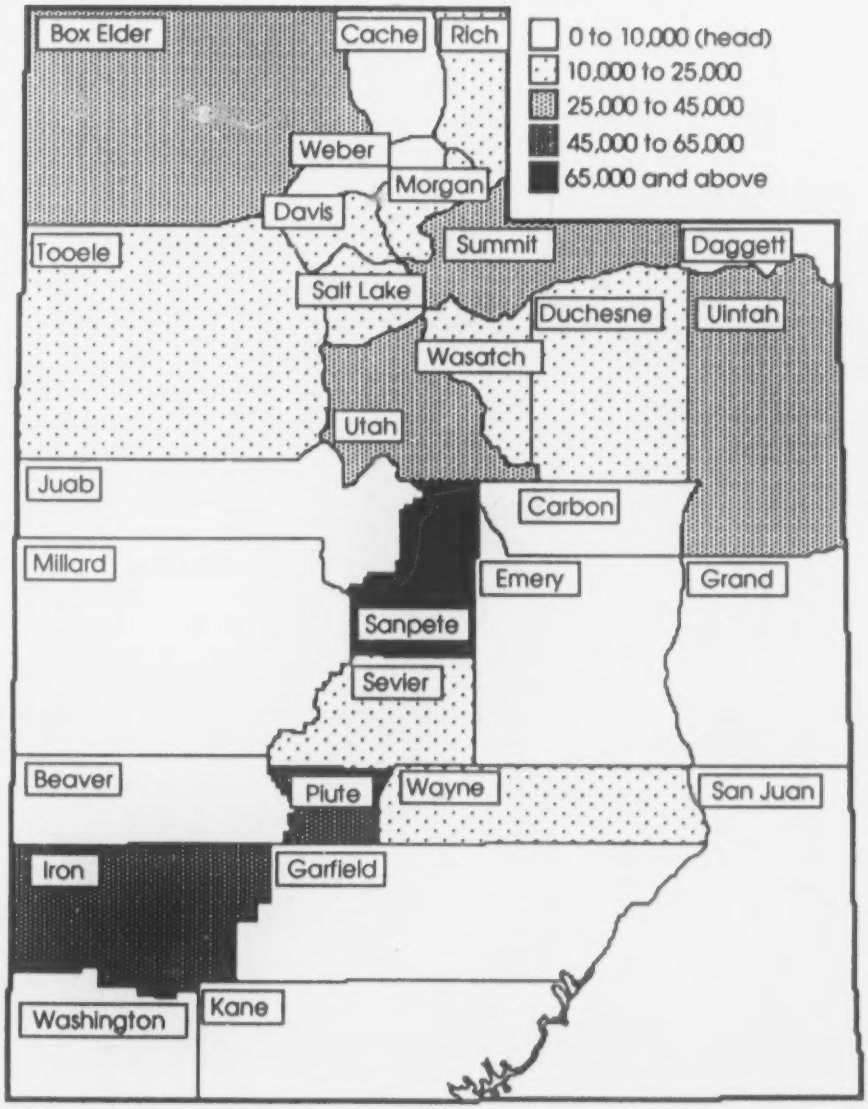
Utah Milk Cow Numbers
By Counties, January 1, 1990



Stock Sheep and Lambs County Estimates, January 1, 1989-90.

County	1989	1990
NORTHERN		
Box Elder	36,000	38,000
Cache	6,600	7,000
Davis	8,200	11,000
Morgan	15,500	17,000
Rich	20,500	19,000
Salt Lake	16,500	18,000
Tooele	10,500	14,000
Weber	5,200	6,000
Total	119,000	130,000
CENTRAL		
Juab	3,400	4,000
Millard	9,300	9,000
Sanpete	90,000	85,000
Sevier	19,500	15,000
Utah	43,800	43,000
Total	166,000	156,000
EASTERN		
Carbon	7,100	7,500
Daggett	1,000	900
Duchesne	17,400	18,000
Emery	6,500	7,500
Grand	300	100
San Juan	3,200	3,000
Summit	37,500	39,000
Uintah	25,000	26,000
Wasatch	18,000	16,000
Total	116,000	118,000
SOUTHERN		
Beaver	1,600	1,000
Garfield	3,200	4,000
Iron	54,300	55,000
Kane	1,500	2,000
Piute	4,700	5,500
Washington	1,500	1,000
Wayne	12,200	12,500
Total	79,000	81,000
STATE	480,000	485,000

Utah Stock Sheep Inventory
By Counties, January 1, 1990



County Estimates for Mink--1987-88 1/.

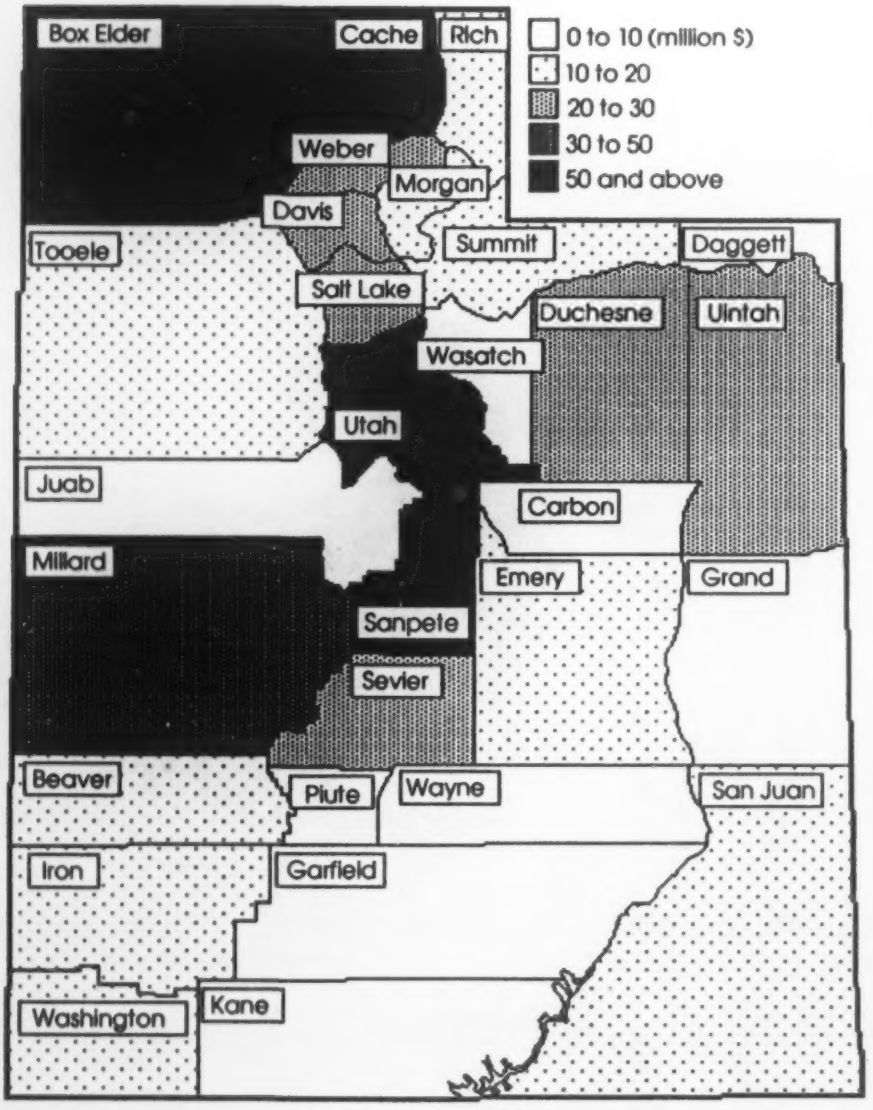
County	Pelts Produced		Females Bred to Produce Kits	
	1987	1988	1988	1989
	Number		Number	
NORTHERN				
Cache	67,300	75,100	20,300	22,000
Morgan	160,900	179,500	48,500	52,500
Salt Lake	81,500	90,900	24,500	26,500
Other	22,900	25,500	6,900	7,500
Total	332,600	371,000	100,200	108,500
CENTRAL				
Utah	222,200	248,000	67,000	72,500
Other	10,900	12,200	3,300	3,400
Total	233,100	260,200	70,300	75,900
EASTERN				
Summit	121,000	135,100	36,500	39,500
Other	3,300	3,700	1,000	1,100
Total	124,300	138,800	37,500	40,600
STATE	690,000	770,000	208,000	225,000

1/ Pelt estimates for 1989 not available until after July 20, 1990.

Cash Receipts from Farming by County - 1987 Revised, 1988 Preliminary.

County	Livestock and Livestock Products		Crops		Total	
	1987	1988	1987	1988	1987	1988
	- - - - - - - - Million Dollars - - - - - - - -					
NORTHERN						
Box Elder	40.0	43.7	20.7	23.3	60.7	67.0
Cache	61.5	67.7	10.1	11.1	71.6	78.8
Davis	10.1	10.9	14.0	15.1	24.1	26.0
Morgan	10.0	12.0	.8	1.0	10.8	13.0
Rich	12.0	15.5	2.6	3.0	14.6	18.5
Salt Lake	18.2	20.9	5.7	5.9	23.9	26.8
Tooele	7.2	9.0	2.3	2.6	9.5	11.6
Weber	21.2	23.7	4.1	4.8	25.3	28.5
Total	180.2	203.4	60.3	66.8	240.5	270.2
CENTRAL						
Juab	4.6	5.2	2.1	2.4	6.7	7.6
Millard	22.1	26.1	15.5	17.9	37.6	44.0
Sanpete	62.6	75.0	4.1	4.7	66.7	79.7
Sevier	18.6	21.9	3.0	3.4	21.6	25.3
Utah	48.9	54.8	18.3	19.5	67.2	74.3
Total	156.8	183.0	43.0	47.9	199.8	230.9
EASTERN						
Carbon	4.3	5.1	.5	.7	4.8	5.8
Daggett	.9	1.3	.2	.3	1.1	1.6
Duchesne	19.4	23.6	3.5	4.5	22.9	28.1
Emery	7.7	8.7	1.4	1.9	9.1	10.6
Grand	2.2	2.9	.3	.4	2.5	3.3
San Juan	6.2	7.3	2.9	2.9	9.1	10.2
Summit	13.2	16.6	1.3	1.4	14.5	18.0
Uintah	14.9	17.5	3.1	3.5	18.0	21.0
Wasatch	8.6	8.7	1.1	1.2	9.7	9.9
Total	77.4	91.7	14.3	16.8	91.7	108.5
SOUTHERN						
Beaver	13.9	15.6	2.4	3.0	16.3	18.6
Garfield	5.7	7.0	1.2	1.4	6.9	8.4
Iron	10.7	11.3	6.5	7.7	17.2	19.0
Kane	2.9	3.8	.3	.3	3.2	4.1
Piute	5.5	6.0	.7	.8	6.2	6.8
Washington	6.0	7.0	4.2	4.6	10.2	11.6
Wayne	6.6	8.1	1.0	1.2	7.6	9.3
Total	51.3	58.8	16.3	19.0	67.6	77.8
STATE	465.7	536.9	133.9	150.5	599.6	687.4

Utah Cash Receipts from Farming
By Counties, 1988



Utah Farms, Land in Farms, and Selected Items--1987 Census 1/

County	Number of Farms	Land in Farms	Average Size of Farms	Total Cropland	Harvested Cropland	Irrigated Land	Value of Land and Buildings	
							Average per Farm	Average per Acre
	Number	Acres					Dollars	
NORTHERN								
Box Elder	1,088	1,584,194	1,456	368,367	170,579	106,686	408,718	282
Cache	1,223	324,105	265	171,545	113,433	83,771	213,371	814
Davis	647	63,244	98	30,376	20,783	24,539	192,927	2,242
Morgan	261	283,105	1,085	22,662	12,508	10,369	437,395	408
Rich	166	514,768	3,101	75,404	51,443	53,998	872,331	283
Salt Lake	734	155,398	212	39,582	19,726	16,030	358,488	1,580
Tooele	299	487,427	1,630	(D)	19,563	18,972	417,270	254
Weber	891	199,496	224	46,342	28,239	31,523	187,487	816
CENTRAL								
Juab	215	273,876	1,274	69,471	30,413	22,609	324,549	281
Millard	630	480,195	762	176,482	98,835	93,419	327,938	422
Sanpete	761	447,526	588	98,500	53,623	110,744	298,264	512
Sevier	476	161,495	339	49,586	32,946	43,475	224,653	667
Utah	1,723	493,902	287	135,352	87,089	78,659	255,683	925
EASTERN								
Carbon	210	223,549	1,065	16,541	5,760	9,051	332,752	304
Daggett	36	25,120	698	9,344	5,905	8,237	276,528	396
Duchesne	753	366,471	487	106,703	48,646	97,174	214,971	418
Emery	446	215,761	484	52,448	20,409	38,935	208,348	442
Grand	81	169,325	2,090	(D)	3,012	4,397	425,481	204
San Juan	218	340,449	1,562	117,780	51,655	8,544	425,005	257
Summit	439	348,827	795	40,965	20,451	29,429	328,770	464
Uintah	693	1,318,672	1,903	(D)	39,616	75,958	325,257	166
Wasatch	298	159,854	536	20,381	11,809	16,955	310,829	517
SOUTHERN								
Beaver	226	187,041	828	37,081	29,118	34,959	281,522	386
Garfield	263	138,559	527	31,772	13,180	22,852	336,586	530
Iron	380	483,118	1,271	73,793	48,183	61,710	493,879	386
Kane	152	207,495	1,365	17,766	3,038	7,742	414,454	320
Piute	126	56,310	447	21,600	12,482	17,710	271,976	577
Washington	414	178,169	430	28,188	9,641	14,467	346,392	730
Wayne	217	101,622	468	23,184	14,801	18,293	276,111	586
State Total	14,066	9,989,073	710	2,028,537	1,076,886	1,161,207	302,838	425

(D) - Withheld to avoid disclosing data for individual farms.

1/ Source: 1987 Preliminary Census of Agriculture, U.S. Department of Commerce, Bureau of the Census.

Number of Farms by Value of Sales, 1987 Census of Agriculture

	Under $2,500	$2,500 to $4,999	$5,500 to $9,999	$10,000 to $24,999	$25,000 to $49,999	$50,000 to $99,999	$100,000+
NORTHERN							
Box Elder	241	116	134	205	129	104	159
Cache	326	132	156	202	122	97	188
Davis	288	92	74	76	33	33	51
Morgan	95	37	22	40	16	10	41
Rich	14	13	18	41	23	25	32
Salt Lake	354	126	97	58	29	31	39
Tooele	106	43	47	47	26	13	17
Weber	397	134	106	107	40	40	67
CENTRAL							
Juab	48	20	35	52	27	13	20
Millard	94	52	93	129	105	69	88
Sanpete	156	82	109	134	88	64	128
Sevier	102	59	73	94	61	50	37
Utah	697	271	198	229	89	87	152
EASTERN							
Carbon	100	36	32	27	2	5	8
Daggett	5	3	5	8	4	9	2
Duchesne	205	95	112	138	93	63	47
Emery	133	77	67	85	43	29	12
Grand	39	10	8	12	5	3	4
San Juan	52	15	29	38	32	22	30
Summit	126	69	67	70	39	24	44
Uintah	240	137	83	112	53	33	35
Wasatch	110	53	38	40	18	17	22
SOUTHERN							
Beaver	47	22	19	30	18	40	50
Garfield	68	33	47	48	34	20	13
Iron	78	47	45	65	42	43	60
Kane	42	20	30	33	16	6	5
Piute	20	9	20	30	22	12	13
Washington	166	66	54	65	29	22	12
Wayne	31	25	36	57	34	21	13
State Total	4,380	1,894	1,854	2,272	1,272	1,005	1,389

Number of Farms by Total Land in Farms, 1987 Census of Agriculture

	1 - 9 Acres	10 - 49 Acres	50 - 179 Acres	180 - 499 Acres	500 - 999 Acres	1,000 + Acres
NORTHERN						
Box Elder	152	234	270	164	86	182
Cache	168	331	371	256	62	35
Davis	205	256	126	44	9	7
Morgan	37	97	51	40	8	28
Rich	16	16	23	28	23	60
Salt Lake	353	244	85	28	7	17
Tooele	38	84	57	33	34	53
Weber	218	405	176	57	20	15
CENTRAL						
Juab	13	32	44	49	26	51
Millard	43	78	167	150	95	97
Sanpete	73	156	246	153	69	64
Sevier	49	141	162	89	12	23
Utah	475	655	360	129	51	53
EASTERN						
Carbon	31	56	48	32	10	33
Daggett	4	0	10	5	8	9
Duchesne	56	149	232	170	87	59
Emery	24	97	134	105	43	43
Grand	19	26	12	10	5	9
San Juan	12	22	27	29	29	99
Summit	69	98	116	61	31	64
Uintah	62	206	200	115	52	58
Wasatch	39	107	90	38	9	15
SOUTHERN						
Beaver	26	43	58	48	21	30
Garfield	23	56	74	61	20	29
Iron	40	70	64	67	46	93
Kane	10	20	20	30	22	50
Piute	8	15	34	36	17	16
Washington	89	92	96	57	33	47
Wayne	13	49	84	53	6	12
State Total	2,365	3,835	3,437	2,137	941	1,351

Weather

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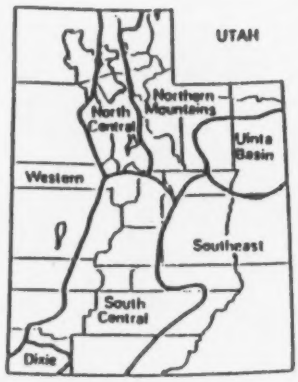
Utah State University, Logan, Utah 84322-4825

In the tables below, values that are above normal are printed in boldface. The portion of the state that lies within each division can be determined from the map at the right.



Precipitation Summary: Overall, 1989 was a dry year for Utah, with only two months, July and August reaching near normal precipitation. By far, the driest division was Dixie, receiving less than fifty percent of normal rainfall during six months of 1989. In December, all of the divisions experienced far below normal precipitation, the highest being only thirteen percent of normal. While conditions throughout the state were dry on the whole, and generally the northern divisions experienced conditions that were below normal, the southern divisions suffered an even lower percent of normal precipitation.

PRECIPITATION, PERCENT-OF-NORMAL, BY CLIMATIC DIVISION, 1989

Division	Month											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Western.....	46	91	96	27	129	81	60	150	78	80	35	9
Dixie.....	76	57	51	0	111	5	40	146	18	68	1	0
North Central.....	45	108	116	39	79	65	75	81	109	112	70	13
South Central.....	83	76	83	34	66	65	93	99	51	82	34	10
Northern Mountains	47	91	116	65	64	89	97	88	137	73	94	18
Uinta Basin.....	39	171	58	19	32	53	76	119	104	56	37	5
Southeast.....	92	80	84	49	51	33	118	114	33	37	1	0

Temperature Summary: The year began far below normal in January and February, and was immediately followed by temperatures well above normal for March and April. The remainder of the year was nearly normal, with May, July, and November yielding temperatures slightly above normal.

MEAN TEMPERATURE, DEPARTURES FROM NORMAL, BY CLIMATIC DIVISION, 1989

Division	Month											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Western.....	-7.7	-8.2	5.9	6.0	.6	-.4	2.5	-.9	.2	-.4	.8	-.1
Dixie.....	-1.4	-1.2	7.0	8.5	3.2	1.6	2.5	-2.5	-.1	-.8	3.1	2.0
North Central.....	-7.3	-8.4	5.1	5.7	.9	.1	3.0	.1	1.1	.5	1.0	.3
South Central.....	-7.4	-4.8	6.8	6.7	1.5	.2	2.8	-.6	1.0	-.5	1.9	1.3
Northern Mountains	-4.3	-5.9	6.3	5.8	1.3	.1	3.1	.2	1.5	.2	2.5	.3
Uinta Basin.....	-5.4	-9.6	4.6	5.9	1.5	.1	2.6	-.8	.6	.8	3.1	3.2
Southeast.....	-4.9	-2.7	6.9	6.6	2.7	-.3	2.3	-.5	1.3	.0	2.8	1.7

Mean Monthly Temperature (°F), Utah, 1989.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	14.0	23.2	46.1	53.2	57.7	65.4	76.9	70.8	63.8	50.8	38.3	28.3	49.0
Milford WSO.....	16.1	24.5	45.3	52.9	M	M	M	M	M	51.1	39.0	29.4	M
Modena.....	21.7	26.6	44.8	52.8	57.2	64.7	74.6	68.4	61.0	49.2	39.1	30.0	49.2
Snowville.....	14.4	17.8	38.3	48.5	53.8	61.7	74.2	68.8	60.2	47.1	35.0	26.1	45.5
Wendover.....	21.3	26.8	45.4	55.6	60.1	70.0	81.6	74.7	65.8	52.0	38.0	27.9	51.6
Division.....	19.2	24.5	44.6	53.0	57.1	65.3	76.9	71.1	62.6	50.1	38.0	28.3	49.2
DIXIE													
St. George.....	37.8	44.5	58.1	67.9	70.9	79.4	88.0	81.9	75.1	62.7	50.4	40.7	63.1
Zion Nat'l Park..	38.6	43.5	57.0	65.6	68.8	78.6	87.4	79.9	75.3	63.4	52.9	42.5	62.8
Division.....	37.3	42.7	55.8	64.9	68.6	76.8	84.5	77.2	72.5	60.7	50.9	41.8	61.1
NORTH CENTRAL													
Corinne.....	16.5	22.0	42.0	51.4	56.5	64.7	74.4	70.2	63.3	51.3	37.5	30.2	48.3
Elberta.....	19.6	22.6	46.2	53.9	59.5	67.1	78.4	74.3	65.6	52.9	39.7	28.7	50.7
Farmington USU...	22.8	26.8	46.3	56.1	61.2	68.7	79.7	74.2	66.4	54.1	40.7	30.9	52.3
Logan USU.....	17.2	20.7	39.6	51.1	56.1	64.4	77.3	71.3	63.1	51.1	38.1	26.1	48.0
Ogden Pioneer PH.	22.2	25.5	44.7	55.7	59.6	68.5	80.7	74.5	67.1	55.5	41.1	31.4	52.2
SLC Airport.....	22.3	25.3	45.8	54.8	59.9	69.2	81.1	75.1	66.4	53.4	40.5	31.4	52.1
Tooele.....	24.6	28.1	45.1	55.0	58.9	67.5	79.5	73.5	66.2	53.2	40.5	30.9	52.4
Trenton.....	12.3	17.5	38.7	50.6	54.0	61.5	71.6	66.7	59.3	47.7	36.7	23.3	45.0
Utah Lake Lehi...	21.3	22.0	41.5	50.9	58.2	64.1	75.5	70.6	60.8	49.3	35.9	30.6	48.4
Division.....	19.7	23.5	43.7	53.1	58.0	66.0	77.6	72.3	64.2	51.8	39.0	29.2	49.8
SOUTH CENTRAL													
Cedar City FAA...	20.8	27.9	45.8	54.0	57.8	65.9	76.0	70.9	64.0	50.8	40.2	31.6	50.5
Fillmore.....	21.5	27.4	48.5	55.1	59.1	66.8	77.7	72.9	66.3	53.3	41.2	32.0	51.8
Kanab PH.....	30.3	37.5	50.5	58.4	62.0	70.6	78.7	72.6	67.0	55.3	46.6	38.4	55.7
Levan.....	16.4	24.1	44.1	52.4	55.9	64.8	78.0	71.6	64.4	51.7	41.2	16.9	48.5
Loa.....	17.6	22.0	41.5	48.4	52.7	58.7	66.6	62.1	56.2	45.7	35.0	28.0	44.5
Manti.....	18.4	26.4	42.4	50.8	55.0	62.3	72.7	68.4	60.7	49.1	38.3	28.3	47.7
Nephi.....	22.2	27.4	46.6	53.9	61.0	67.2	77.4	73.0	66.0	53.8	41.1	31.7	51.8
Panguitch.....	15.6	26.7	42.1	48.8	52.4	59.1	67.5	63.6	57.1	45.9	36.4	26.7	45.2
Richfield.....	14.2	24.8	45.1	51.9	56.0	63.4	71.9	67.3	60.8	48.6	37.1	28.4	47.5
Division.....	19.7	26.8	43.8	51.6	55.5	63.3	73.2	67.4	61.2	49.3	39.0	30.1	48.4
NORTHERN MOUNTAINS													
Coalville.....	16.1	33.2	39.5	47.9	52.9	58.6	67.9	63.6	55.9	46.8	34.7	24.7	45.2
Heber.....	15.7	20.4	40.8	49.0	53.6	59.2	69.5	65.9	59.0	48.2	35.9	25.9	45.3
Manila.....	26.4	15.7	M	48.7	53.5	60.4	70.8	65.6	58.2	47.4	37.1	27.9	46.5M
Morgan.....	15.2	20.9	41.3	50.4	54.6	62.0	72.2	67.5	60.4	48.6	36.1	26.8	46.3
Olmstead PH.....	24.4	28.2	45.8	54.6	61.0	66.9	79.0	73.9	66.5	54.6	41.6	32.4	52.9
Scofield Dam.....	7.3	13.5	30.3	41.0	46.3	M	63.7	58.1	51.0	39.9	30.6	15.1	36.1M
Silver Lk Brighton	16.4	19.1	29.8	36.9	42.0	49.1	60.8	56.1	49.2	39.1	28.1	20.1	37.2
Woodruff.....	12.4	10.3	35.0	43.0	48.9	55.0	65.0	59.5	52.7	41.8	30.2	16.5	39.2
Division.....	16.9	18.8	36.9	45.8	50.9	57.7	68.4	63.3	56.5	45.1	34.5	23.9	43.2
UINTA BASIN													
Duchesne.....	12.8	13.8	40.2	52.2	57.2	63.4	72.7	66.7	60.1	48.5	37.6	26.4	46.0
Fort Duchesne....	12.3	13.4	39.0	52.9	57.8	65.7	75.3	69.6	60.9	50.0	37.0	23.9	46.5
Jensen.....	8.3	14.3	40.3	52.0	58.4	65.4	74.7	68.7	60.9	49.8	36.6	25.1	46.2
Division.....	11.8	14.5	40.1	52.1	57.7	64.6	74.7	68.5	60.9	49.3	36.6	24.4	46.3
SOUTHEAST													
Blanding.....	M	M	M	M	M	M	70.8M	71.5	66.9	53.4	42.9	33.4	M
Ferron.....	17.6	25.7	43.9	53.3	58.1	65.6	75.9	68.4	63.1	50.1	40.1	29.0	49.2
Hanksville.....	17.8	31.1	50.3	60.1	65.1	72.3	81.8	74.9	66.9	52.7	41.0	28.3	53.5
Moab 4 NW.....	23.6	34.7	52.7	60.9	66.9	73.3	81.4	76.5	69.6	57.2	44.1	33.1	56.2
Price Warehouse..	17.5M	26.0	45.0	54.7	58.1	64.7	71.5M	72.9M	64.8	M	41.3	31.9	M
Division.....	22.1	31.1	47.9	56.8	62.5	70.1	78.9	73.3	66.7	53.7	42.3	31.0	53.0
STATE AVERAGE.....	19.6	25.5	44.1	52.9	57.6	65.3	75.5	69.9	62.7	50.4	39.0	28.8	49.2

Source: Utah State Climatologist Office. M-Missing data.

Normal Mean Monthly Temperature (°F), Utah, 1951-80.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	26.0	32.8	39.3	47.9	56.9	67.6	76.2	73.4	63.6	51.0	37.3	28.0	50.0
Milford WSO.....	26.4	32.1	38.2	46.3	55.9	65.8	74.3	72.1	62.6	50.3	36.8	28.2	49.1
Modena.....	28.7	34.0	38.6	46.2	55.2	64.8	72.4	70.3	62.3	51.0	38.1	30.3	49.3
Snowville.....	22.1	28.1	33.6	43.1	52.5	60.9	70.0	67.7	58.6	46.6	34.0	24.7	45.2
Wendover.....	28.1	34.4	41.4	50.5	60.8	70.4	79.8	76.7	66.0	52.4	38.2	28.8	52.3
Division....	26.8	32.5	38.5	46.5	56.0	65.1	73.8	71.3	62.0	50.1	36.9	28.1	49.0
DIXIE													
St. George.....	40.3	46.2	51.9	59.8	68.9	78.3	84.9	82.8	75.0	63.3	49.5	40.9	61.8
Zion Nat'l Park.	40.1	45.0	49.3	57.4	67.0	77.3	84.2	81.8	75.1	64.1	49.9	41.5	61.1
Division....	39.6	45.1	50.1	57.8	66.8	76.3	83.2	81.0	73.8	62.5	48.9	40.6	60.5
NORTH CENTRAL													
Corinne.....	25.4	31.0	38.4	47.7	56.8	65.7	74.4	71.9	62.2	52.9	37.2	28.1	49.3
Elberta.....	27.6	33.0	39.9	48.2	57.5	66.8	75.1	72.6	63.5	51.5	38.7	29.2	50.3
Farmington USU..	29.1	34.3	40.6	49.0	58.5	67.2	75.7	73.4	63.9	52.6	39.5	30.6	51.2
Logan USU.....	24.7	29.0	36.2	46.0	55.9	64.0	73.0	71.1	61.8	50.6	36.7	27.2	48.0
Ogden Pioneer PH	28.6	33.6	40.0	49.0	59.0	68.0	77.0	74.3	64.8	53.1	39.4	30.5	51.4
SLC Airport.....	28.6	34.1	40.7	49.2	58.8	68.3	77.5	74.9	65.0	53.0	39.7	30.3	51.7
Tooele.....	29.5	33.9	39.6	48.0	57.7	67.0	75.8	73.0	63.9	51.8	38.8	30.7	50.8
Trenton.....	21.1	26.2	33.8	44.4	54.0	61.4	69.2	67.0	59.6	48.4	35.7	24.5	45.5
Utah Lake Lehi..	26.2	31.5	38.3	46.8	56.3	64.8	72.6	70.3	61.1	49.8	37.0	28.4	48.6
Division....	26.8	31.7	38.5	47.4	57.0	65.7	74.3	72.0	62.7	51.3	37.8	28.7	49.5
SOUTH CENTRAL													
Cedar City FAA..	29.6	34.2	39.2	47.0	56.3	66.3	74.0	71.8	63.5	52.0	39.1	31.1	50.3
Fillmore.....	29.1	34.5	40.5	48.4	57.7	67.4	75.9	73.6	65.0	53.0	39.3	30.4	51.2
Kanab PH.....	35.1	39.7	44.0	51.5	60.0	69.3	75.9	73.7	67.2	57.1	44.8	36.8	54.6
Levan.....	26.3	31.6	38.3	46.5	55.9	65.2	73.6	71.2	62.6	51.4	37.9	28.3	49.1
Loa.....	23.6	27.8	32.9	40.8	50.0	58.4	64.8	62.4	55.0	45.1	32.7	24.9	43.2
Manti.....	26.1	30.6	37.4	45.6	54.6	63.3	70.6	68.5	60.3	49.9	36.7	27.8	47.6
Nephi.....	28.9	33.4	39.4	47.7	57.2	67.0	76.0	73.5	64.4	52.9	39.5	30.7	50.9
Panguitch.....	24.2	28.1	33.9	41.9	50.3	42.2	65.5	63.2	56.0	46.6	34.1	25.3	43.9
Richfield KSVC..	28.0	32.9	38.9	46.3	55.0	63.5	70.8	68.8	60.4	49.9	37.5	29.4	48.5
Division....	27.2	31.7	37.3	45.2	54.3	63.5	71.1	68.7	60.8	50.2	37.3	28.9	48.0
NORTHERN MOUNTAINS													
Coalville.....	24.4	28.3	34.5	43.2	51.3	57.3	65.6	63.9	56.4	46.9	35.2	26.1	44.5
Heber.....	21.8	26.3	33.9	42.9	51.8	59.4	67.4	65.4	57.2	47.4	34.2	24.8	44.4
Manila.....	22.1	26.2	33.9	41.8	51.9	60.3	67.8	65.8	57.4	47.3	33.5	23.5	44.3
Morgan.....	23.5	28.1	35.3	44.3	53.5	61.6	69.2	67.0	58.2	48.0	34.6	25.9	45.8
Olmstead PH.....	30.1	32.6	39.4	47.9	56.7	65.9	76.1	73.1	64.1	53.4	39.9	30.7	50.8
Scofield.....	16.1	21.3	26.4	34.8	45.0	52.4	59.0	57.1	50.1	41.3	28.4	18.3	37.5
Silver Lk Brighton	19.0	21.0	24.0	31.6	40.9	50.1	58.2	56.2	48.7	39.1	27.0	20.8	36.4
Woodruff.....	15.8	18.9	26.9	38.1	47.5	55.4	62.6	60.3	51.8	41.5	28.2	18.6	38.8
Division....	21.6	25.3	31.6	40.9	50.3	58.5	66.4	64.2	56.0	45.9	32.9	24.2	43.2
UINTA BASIN													
Duchesne	19.0	25.5	35.4	45.7	55.9	64.2	71.2	68.7	60.0	48.3	33.4	22.2	45.7
Fort Duchesne...	14.8	22.0	34.6	45.3	55.8	64.4	71.5	68.7	59.4	47.6	32.7	19.5	44.7
Jensen.....	15.4	22.8	35.3	46.5	56.8	65.0	72.2	69.1	60.0	48.0	33.3	20.0	45.4
Division....	16.2	23.6	35.4	46.2	56.3	64.7	71.9	69.2	60.1	48.2	33.2	20.7	45.5
SOUTHEAST													
Blanding.....	27.3	33.0	38.9	47.1	56.9	66.9	73.5	70.8	63.1	51.8	38.4	29.5	49.8
Ferron.....	22.8	29.0	36.4	46.1	56.0	65.6	72.6	69.6	61.6	50.7	36.2	26.0	47.7
Hanksville.....	25.6	34.1	42.9	52.4	62.9	72.8	80.0	77.0	67.4	54.4	39.0	28.2	53.1
Moab 4 NW.....	30.2	38.0	47.0	56.4	66.1	75.2	82.1	79.5	70.5	58.0	43.5	32.9	56.6
Price Warehouse.	24.4	30.7	38.1	47.1	58.6	66.8	74.3	71.6	63.4	52.1	37.7	27.4	49.4
Division....	26.6	33.8	41.3	50.5	60.5	70.0	76.9	74.2	65.7	53.9	39.5	29.1	51.8
STATE AVERAGE....	25.6	31.3	38.0	46.7	56.3	65.3	73.1	70.6	62.0	50.7	37.1	27.7	48.7

Source: Utah State Climatologist Office.

Total Precipitation (inches), Utah, 1989.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	.41	.31	.69	.19	.30	.19	.02	.31	.24	.93	.08	.06	3.73
Milford.....	.69	.56	1.19	.16	M	M	M	M	M	.76	.11	T	3.47 M
Modena.....	.35	1.05	.77	.05	1.14	.46	.81	1.42	.17	1.11	.04	.00	7.37
Snowville.....	1.44	.03	.87	.48	1.29	.81	.07	.65	.46	.25	.41	.22	6.98
Wendover.....	.03	.14	.73	.70	1.56	.44	.17	.94	.25	.64	.14	T	5.74
Division.....	.27	.52	.71	.22	1.17	.34	.38	1.08	.43	.52	.22	.05	6.11
DIXIE													
St. George.....	1.00	.79	.43	T	.49	.01	.19	1.51	T	.29	.02	.00	4.73
Zion Nat'l Park.	1.48	.82	1.02	T	1.31	.05	1.07	2.10	.13	.55	.01	.00	8.54
Division.....	1.03	.78	.73	.00	.73	.02	.31	1.47	.14	.53	.01	.00	5.75
NORTH CENTRAL													
Corinne.....	.58	.56	1.82	.65	1.73	.25	.21	.84	.73	1.40	.94	.08	9.79
Elberta.....	.28	1.79	1.06	.51	.55	.26	.47	.91	.93	.51	.77	.17	8.21
Farmington USU..	1.39	1.65	1.44	.69	2.02	1.21	.23	1.15	.64	2.24	.80	.19	13.65
Logan USU.....	.97	1.38	3.37	1.05	1.85	.85	.01	.30	1.27	2.01	1.11	.33	14.50
Ogden Pioneer PH	1.33	1.76	2.51	.38	1.43	.58	.10	.60	.66	1.81	2.00	.19	13.35
SLC Airport.....	.56	1.57	1.77	.46	1.83	.22	.39	.90	.49	1.82	.73	.13	10.87
Tooele.....	.77	2.22	2.18	.87	2.27	.71	.75	1.08	.82	2.22	.84	.36	15.09
Trenton.....	.68	1.40	2.96	.71	1.74	1.21	.35	.33	1.15	1.26	1.03	.23	13.05
Utah Lake Lehi..	.07	.49	1.24	1.08	.59	.42	.80	1.06	.85	.00	.50	.10	7.20
Division.....	.70	1.50	1.86	.77	1.27	.49	.49	.77	1.08	1.47	.94	.18	11.52
SOUTH CENTRAL													
Cedar City FAA..	.97	.95	.77	.08	.65	.26	1.06	.66	.21	.50	.13	T	6.24
Fillmore.....	1.41	1.11	.83	.47	.55	.28	.57	.61	.51	1.17	.33	.15	7.99
Kanab PH.....	.82	.85	1.05	T	.52	T	.86	1.07	.22	.74	.04	.00	6.17
Levan.....	.91	.94	1.49	.62	.32	.44	.51	.48	1.56	1.70	.82	.39	10.18
Loa.....	.51	.40	.35	.22	.95	.41	.38	2.12	.44	T	.05	T	5.83
Manti.....	.83	.61	1.47	1.35	.90	.51	.89	1.14	1.18	1.50	.78	.36	11.52
Nephi.....	.73	.94	1.58	.81	.39	.87	.86	1.20	2.12	1.86	.77	.36	12.49
Panguitch.....	.49	.27	.43	.45	.63	.34	1.53	1.67	.01	.22	.11	.00	6.15
Richfield KSVC..	.86	.76	.87	.45	.50	.53	.29	.30	.32	.53	.21	.01	5.63
Division.....	.91	.81	.96	.35	.62	.35	.89	1.30	.51	.75	.33	.10	7.88
NORTHERN MOUNTAINS													
Coalville.....	1.15	2.10	2.30	2.18	1.33	1.04	2.09	.52	1.49	1.05	1.06	.11	16.42
Heber.....	.81	1.90	1.98	.74	.15	.46	.71	1.45	2.10	.70	1.29	.17	12.46
Manila.....	.05	1.07	M	.35	1.15	.90	.61	1.09	1.30	.16	.03	.08	6.79 M
Morgan.....	1.40	1.66	2.59	1.27	.76	1.15	.47	.56	.78	1.80	1.37	.17	13.98
Olmstead PH.....	.65	1.56	1.63	1.73	.71	.48	.11	1.01	1.75	1.42	1.38	.10	12.53
Scofield Dam....	.57	.70	1.12	.62	.47	M	.45	1.99	1.62	.41	.79	.20	8.94 M
Silver Lk Brighton	3.53	4.36	5.87	3.40	1.22	1.85	2.19	1.51	2.75	2.70	4.78	.76	34.92
Woodruff.....	.05	.88	.53	1.26	1.15	1.42	.50	.22	1.40	.39	.43	.27	8.50
Division.....	1.02	1.74	2.19	1.22	.99	1.04	.85	1.08	1.57	1.06	1.52	.35	14.63
UINTA BASIN													
Duchesne AP.....	.35	1.18	.07	.23	.40	.42	.51	1.23	.67	.05	.09	.05	5.25
Fort Duchesne...	.04	M	M	.03	.17	.18	.21	1.12	.58	.47	.01	.02	2.83 M
Jensen.....	.19	.56	.14	.06	.20	.37	.45	.47	.70	.26	.32	.08	3.80
Division.....	.20	.77	.33	.13	.25	.38	.44	.96	.74	.49	.20	.03	4.92
SOUTHEAST													
Blanding.....	M	M	M	M	M	M	1.99 M	.73	.30	.27	T	.00	3.29 M
Ferron.....	.49	.35	.39	.10	.66	.31	.74	2.05	.42	.15	.07	.08	5.81
Hanksville.....	.23	.36	.11	.10	.06	.13	.31	.70	.13	.08	.02	.00	2.23
Moab 4 NW.....	.79	.58	.73	.07	.17	.05	.64	1.44	.09	.33	.01	T	4.90
Price Warehouse.	.51	.09	.43	.02	.31	.11	.81	2.37	.90	.45	.08	.01	6.09
Division.....	.66	.49	.54	.03	.34	.13	.91	1.20	.26	.40	.01	.00	4.97
STATE AVERAGE....	.64	.82	.97	.36	.76	.44	.69	1.13	.61	.67	.40	.09	7.39

Source: Utah State Climatologist Office. M-Missing data. T-Trace

Normal Precipitation (inches), Utah, 1951-80.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	.55	.61	.80	.79	.94	.41	.58	.48	.56	.57	.59	.63	7.51
Milford.....	.69	.74	.99	.96	.73	.42	.61	.71	.69	.73	.69	.63	8.59
Modena.....	.69	.73	.80	.68	.70	.40	1.14	1.21	.80	.87	.73	.49	9.24
Snowville.....	1.11	.88	.86	1.14	1.48	1.26	.54	.84	.70	.70	1.00	.94	11.45
Wendover.....	.34	.36	.42	.43	.85	.61	.25	.42	.23	.47	.38	.30	5.06
Division....	.59	.57	.74	.81	.92	.67	.63	.72	.55	.65	.62	.54	8.01
DIXIE													
St. George.....	1.04	.90	.98	.47	.49	.21	.62	.65	.52	.56	.75	.72	7.91
Zion Nat'l Park.	1.76	1.71	1.78	1.12	.80	.60	.98	1.59	.88	.90	1.20	1.26	14.58
Division....	1.35	1.36	1.42	.83	.66	.36	.78	1.01	.76	.78	.99	.96	11.26
NORTH CENTRAL													
Corinne.....	1.78	1.52	1.36	1.73	1.66	1.42	.48	.80	1.04	1.18	1.39	1.50	15.86
Elberta.....	.90	.80	.93	1.06	.98	.73	.65	1.04	.68	.85	.90	.94	10.46
Farmington USU..	2.11	1.89	2.03	2.94	2.22	1.36	.58	1.08	1.11	1.52	1.71	1.77	20.32
Logan USU.....	1.68	1.57	1.75	2.06	1.71	1.53	.45	.96	1.06	1.43	1.53	1.63	17.36
Ogden Pioneer PH	2.36	1.90	2.05	2.52	2.14	1.58	.65	.98	1.20	1.58	1.73	1.89	20.58
SLC Airport.....	1.35	1.33	1.72	2.21	1.47	.97	.72	.92	.89	1.14	1.22	1.37	15.31
Tooele.....	1.22	1.32	1.94	2.38	1.58	1.06	.75	.86	.92	1.36	1.43	1.42	16.24
Trenton.....	1.74	1.41	1.54	1.83	1.78	1.55	.55	.96	1.02	1.31	1.34	1.40	16.43
Utah Lake Lehi..	.95	.76	1.09	1.25	.98	.71	.61	.88	.74	.92	.89	.88	10.66
Division....	1.54	1.39	1.60	1.95	1.60	1.19	.65	.95	.99	1.31	1.35	1.41	15.93
SOUTH CENTRAL													
Cedar City FAA..	.64	.80	1.06	.98	.82	.45	1.10	1.17	.90	.78	.91	.65	10.26
Fillmore.....	1.45	1.52	1.79	1.75	1.26	.68	.63	.78	.93	1.07	1.31	1.34	14.51
Kanab PH.....	1.75	1.25	1.41	.82	.68	.38	.87	1.37	.79	.90	1.11	1.24	12.57
Levan.....	1.31	1.32	1.52	1.66	1.33	.76	.68	.91	1.05	1.09	1.24	1.37	14.24
Loa.....	.39	.27	.34	.42	.69	.39	1.10	1.21	.87	.63	.42	.34	7.07
Manti.....	1.13	1.20	1.28	1.40	1.16	.69	.67	.89	1.08	.99	1.05	.99	12.53
Nephi.....	1.30	1.27	1.46	1.48	1.22	.76	.63	.95	.88	1.07	1.22	1.26	13.50
Panguitch.....	.54	.65	.66	.60	.80	.58	1.46	1.56	1.10	.68	.74	.52	9.89
Richfield.....	.63	.62	.63	.71	.73	.41	.81	.69	.80	.64	.59	.56	7.82
Division....	1.08	1.05	1.16	1.04	.09	.54	.96	1.30	1.00	.92	.98	.97	11.09
NORTHERN MOUNTAINS													
Coalville.....	1.28	1.10	1.35	1.83	1.58	1.12	.83	.95	1.03	1.27	1.35	1.35	15.04
Heber.....	2.09	1.52	1.27	1.32	1.18	.93	.65	.92	.92	1.29	1.50	1.73	15.32
Manila.....	.37	.51	.69	1.31	1.25	.87	.92	.92	.93	1.08	.48	.38	9.71
Morgan.....	1.91	1.73	1.76	2.19	1.76	1.30	.52	.97	1.04	1.50	1.64	1.75	18.07
Olmstead PH.....	2.44	1.89	1.95	2.08	2.22	1.36	.48	1.06	1.10	1.10	1.74	2.20	19.62
Scofield.....	2.77	2.52	2.43	1.78	1.45	.93	.95	1.46	1.27	1.31	1.53	1.89	20.29
Silver Lk Brighton	5.56	4.96	5.26	4.44	2.83	1.76	1.28	1.90	1.96	2.94	4.30	5.02	42.21
Woodruff.....	.51	.48	.59	.88	.89	1.12	.72	.74	.79	.82	.62	.58	8.74
Division....	2.18	1.93	1.89	1.88	1.55	1.17	.88	1.23	1.15	1.45	1.62	1.99	18.92
UINTA BASIN													
Duchesne AP.....	.41	.49	.55	.70	.83	.92	.64	1.07	.92	.94	.48	.66	8.61
Fort Duchesne...	.44	.34	.50	.60	.62	.69	.52	.73	.61	.78	.47	.52	6.82
Jensen.....	.51	.52	.61	.64	.75	.69	.43	.67	.71	.89	.53	.60	7.55
Division....	.52	.45	.58	.68	.78	.72	.58	.81	.71	.87	.54	.61	7.85
SOUTHEAST													
Blanding.....	1.34	.95	.80	.67	.59	.37	1.04	1.41	.89	1.46	.89	1.29	11.70
Ferron.....	.66	.60	.55	.47	.78	.51	.85	1.17	.78	.70	.58	.51	8.16
Hanksville.....	.30	.22	.35	.42	.49	.23	.44	.83	.60	.63	.43	.30	5.24
Moab 4 NW.....	.57	.52	.67	.91	.68	.37	.52	.83	.66	.94	.66	.67	8.00
Price Warehouse.	.73	.76	.72	.50	.72	.70	.85	1.17	.97	1.09	.60	.87	9.68
Division....	.73	.61	.64	.61	.67	.40	.77	1.05	.78	1.08	.73	.74	8.81
STATE AVERAGE....	1.01	.92	1.01	1.02	.98	.68	.77	1.02	.83	.98	.90	.94	11.06

Source: Utah State Climatologist Office.

Accumulated Growing Degree Days Base 50, by Months, Utah, 1989.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	0	18	191	280	347	445	686	590	463	267	102	7	3396
Milford.....	0	31	195	314	M	M	M	M	M	300	128	22	M
Modena.....	1	42	174	316	380	450	663	517	405	241	111	18	3318
Snowville.....	0	0	54	213	290	429	629	540	402	242	55	0	2854
Wendover.....	1	12	103	256	331	578	866	721	444	203	45	0	3560
Division.....	0	24	150	270	331	439	689	568	419	255	79	9	3233
DIXIE													
St. George.....	42	148	349	504	581	721	896	791	622	411	257	117	5439
Zion Nat'l Park..	55	137	328	472	542	713	883	778	670	426	253	131	5388
Division.....	48	140	334	478	526	688	863	760	625	408	251	123	5244
NORTH CENTRAL													
Corinne.....	0	0	81	218	324	465	657	601	457	256	36	0	3095
Elberta.....	1	8	164	296	412	474	717	682	482	298	96	4	3634
Farmington USU...	0	8	141	302	417	534	748	689	502	284	59	0	3684
Logan USU.....	0	1	53	189	285	424	741	681	388	219	31	0	3012
Ogden Pioneer PH.	0	4	103	254	335	514	822	691	476	256	58	1	3514
SLC Airport.....	0	2	122	255	357	528	800	695	478	256	58	1	3552
Tooele.....	0	8	131	272	337	489	771	665	464	263	69	0	3469
Trenton.....	0	0	40	230	304	406	604	509	405	237	43	0	2778
Division.....	0	5	83	248	335	448	725	634	439	248	52	2	3219
SOUTH CENTRAL													
Cedar City FAA...	0	38	177	307	347	486	695	586	424	263	118	18	3459
Fillmore.....	2	30	200	293	368	490	736	636	468	278	91	6	3598
Kanab.....	8	78	258	368	407	542	733	622	507	325	196	73	4117
Levan.....	0	15	166	281	387	476	694	614	474	308	131	4	3550
Loa.....	0	16	132	232	304	359	494	461	342	210	96	17	2663
Manti.....	0	11	108	223	292	394	646	572	379	221	73	2	2921
Nephi.....	4	31	192	287	380	525	684	645	502	338	131	14	3733
Panguitch.....	0	33	184	285	334	418	530	504	388	265	137	19	3097
Richfield.....	0	18	195	279	322	438	597	560	465	265	104	5	3248
Division.....	1	25	149	268	349	445	618	534	417	250	96	18	3170
NORTHERN MOUNTAINS													
Heber.....	0	7	97	211	301	369	571	493	393	265	77	0	2784
Manila.....	4	1	M	202	297	391	604	515	374	194	50	1	2633M
Morgan.....	0	4	98	228	344	403	595	533	431	268	65	0	2969
Olmstead PH.....	1	23	132	265	393	448	738	644	484	289	92	6	3515
Scofield.....	0	0	9	66	169	M	484	368	223	110	20	0	1449M
Silver Lk Brighton	0	0	5	42	85	162	378	284	188	72	13	0	1229
Woodruff.....	0	1	57	162	160	307	500	408	319	170	33	0	2117
Division.....	1	6	61	168	287	341	560	463	352	213	56	1	2509
UINTA													
Duchesne.....	0	0	121	274	348	444	642	538	360	226	65	6	3024
Ft. Duchesne.....	0	0	100	277	369	481	646	565	434	259	67	2	3200
Jensen.....	0	0	156	296	393	448	632	557	410	272	77	1	3242
Division.....	0	0	127	280	364	426	648	572	381	254	72	1	3125
SOUTHEAST													
Blanding.....	M	M	M	M	M	M	M	621	462	244	100	6	M
Ferron.....	0	11	152	270	341	478	705	568	411	256	106	2	3300
Hanksville.....	0	51	276	438	502	566	702	637	521	361	182	17	4253
Moab 4 NW.....	0	71	302	431	514	595	717	686	547	396	199	31	4489
Price Warehouse..	0	6	78	220	310	418	683	514	385	188	42	0	2844
Division.....	0	34	200	344	412	546	706	624	467	297	134	8	3772
STATE AVERAGE.....	1	23	148	277	355	458	664	569	424	261	94	10	3284

Source: Utah State Climatologist, Department of Soil Science and Biomet, Utah State University, Logan, Utah 84322-4825. M-Missing data.

Normal Growing Degree Days Base 50, by Months, Utah.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	0	0	63	201	357	529	664	628	456	262	34	0	3194
Milford.....	0	0	54	194	370	514	621	602	450	256	36	0	3097
Modena.....	0	2	83	215	380	515	583	573	460	289	65	0	3165
Snowville.....	0	0	7	135	307	448	556	546	401	210	12	0	2622
Wendover.....	0	0	39	179	368	617	803	755	456	189	8	0	3414
Division.....	0	1	60	189	358	505	628	601	439	246	36	0	3063
DIXIE													
St. George.....	65	150	277	398	585	699	815	791	629	464	227	86	5186
Zion Nat'l Park..	29	100	210	338	547	707	825	807	674	433	187	56	4913
Division.....	45	122	238	360	546	675	793	774	628	435	202	69	4887
NORTH CENTRAL													
Corinne.....	0	0	31	180	355	492	642	605	427	226	18	0	2976
Elberta.....	0	0	59	202	374	519	660	630	437	245	31	0	3157
Farmington USU...	0	0	50	189	361	522	680	648	438	246	30	0	3164
Logan USU.....	0	0	3	112	285	435	655	615	369	174	4	0	2652
Ogden Pioneer....	0	0	31	167	342	546	727	687	437	230	23	0	3190
SLC Airport.....	0	0	39	178	357	553	717	687	449	238	26	0	3244
Tooele.....	0	0	20	143	305	516	736	678	400	186	12	0	2996
Trenton.....	0	0	4	124	306	431	550	541	416	224	15	0	2611
Division.....	0	0	29	161	336	498	660	627	423	222	19	0	2975
SOUTH CENTRAL													
Cedar City FAA...	0	0	50	179	348	506	657	628	433	257	47	0	3105
Fillmore.....	0	0	67	198	365	529	682	657	459	267	42	0	3266
Kanab.....	0	48	147	269	423	557	671	656	507	346	137	14	3780
Levan.....	0	0	43	180	350	494	625	597	440	256	35	0	3020
Loa.....	0	0	9	115	273	401	487	448	336	187	15	0	2271
Manti.....	0	0	29	158	319	449	588	548	391	218	20	0	2720
Nephi.....	0	0	43	181	357	520	663	636	460	275	47	0	3182
Panguitch.....	0	0	25	156	304	402	520	492	385	239	34	0	2557
Richfield.....	0	1	77	204	362	492	569	554	440	277	56	0	3032
Division.....	0	3	46	167	332	475	592	562	416	245	43	1	2882
NORTHERN MOUNTAINS													
Heber.....	0	0	7	124	297	421	542	523	388	217	15	0	2534
Manila.....	0	0	0	91	266	404	545	499	343	163	4	0	2315
Morgan.....	0	0	14	145	325	463	557	543	408	225	15	0	2695
Olmstead PH.....	0	0	37	160	319	493	684	656	437	249	26	0	3061
Silver Lk Brighton	0	0	0	0	67	211	327	301	179	32	0	0	1117
Woodruff.....	0	0	0	47	214	336	462	441	310	132	0	0	1942
Division.....	0	0	6	89	252	387	515	488	344	169	9	0	2259
UINTA BASIN													
Duchesne.....	0	0	23	175	356	472	592	552	392	200	9	0	2771
Fort Duchesne....	0	0	27	187	368	499	570	551	416	214	10	0	2842
Jensen.....	0	0	38	208	391	513	572	556	439	237	16	0	2970
Division.....	0	0	32	193	371	494	587	559	416	215	11	0	2878
SOUTHEAST													
Blanding.....	0	0	40	180	357	514	653	608	415	232	27	0	3026
Ferron.....	0	0	19	151	318	474	652	581	391	223	21	0	2830
Hanksville.....	0	10	140	291	476	605	720	687	515	315	63	0	3822
Moab 4 NW.....	0	26	177	327	522	657	767	736	564	363	107	0	4246
Price.....	0	0	42	201	395	518	654	616	433	250	30	0	3139
Division.....	0	10	99	242	424	572	697	659	482	284	55	0	3524
STATE AVERAGE.....	0	5	59	186	358	502	625	595	433	245	39	1	3048

Source: Utah State Climatologist Office.

Accumulated Growing Degree Days Base 40, by Months, Utah, 1989.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	5	54	335	451	537	664	856	779	637	432	230	75	5060
Milford.....	5	75	339	460	M	M	M	M	M	463	256	123	M
Modena.....	19	101	320	479	536	642	829	725	578	395	231	115	4970
Snowville.....	0	6	166	366	470	614	786	754	595	385	170	24	4336
Wendover.....	7	56	258	486	608	814	1041	941	731	412	146	15	5515
Division.....	-3	74	304	450	488	655	858	774	612	420	213	62	4907
DIXIE													
St. George.....	156	273	546	711	794	886	1066	970	809	618	418	270	7517
Zion Nat'l Park..	173	260	543	666	734	882	1054	957	863	678	439	283	7532
Division.....	163	264	540	661	740	855	1033	939	814	625	424	275	7333
NORTH CENTRAL													
Corinne.....	0	23	208	384	516	680	830	774	642	426	142	20	4645
Elberta.....	13	43	324	463	567	685	887	850	658	468	219	34	5211
Farmington USU...	2	49	292	486	619	742	919	862	701	474	178	32	5356
Logan USU.....	6	15	150	370	497	685	930	887	653	395	124	8	4720
Ogden Pioneer....	3	35	251	467	585	767	1002	911	751	471	184	28	5455
SLC Airport.....	5	35	270	454	581	766	975	889	717	454	181	33	5360
Tooele.....	11	50	287	471	560	733	951	849	718	453	182	39	5304
Trenton.....	0	10	143	390	483	602	754	684	572	385	148	15	4186
Division.....	5	25	239	434	539	697	905	832	662	426	172	22	4958
SOUTH CENTRAL													
Cedar City FAA...	11	93	329	474	549	691	875	821	626	439	248	117	5273
Fillmore.....	18	81	367	487	576	726	907	857	698	471	215	68	5471
Kanab PH.....	69	168	419	534	606	751	908	831	713	508	345	226	6078
Levan.....	4	58	308	430	502	642	864	773	628	437	262	65	4973
Loa.....	16	54	271	386	468	539	710	640	513	359	204	93	4253
Manti.....	9	47	241	391	488	611	826	774	591	371	192	24	4565
Nephi.....	25	87	343	466	548	690	859	812	647	489	256	95	5317
Panguitch.....	9	93	332	437	476	553	672	664	545	421	269	124	4594
Richfield.....	18	57	340	438	497	627	772	720	590	423	230	74	4786
Division.....	2	73	310	437	523	638	803	743	597	415	233	90	4864
NORTHERN MOUNTAINS													
Heber.....	7	39	225	371	473	539	716	704	560	412	197	17	4260
Manila.....	45	29	M	364	466	572	791	726	534	342	158	35	4062M
Morgan.....	6	32	229	384	504	579	750	702	581	406	177	18	4368
Olmstead PH.....	20	70	276	456	605	698	913	850	699	462	215	41	5305
Scofield.....	7	22	64	173	320	M	666	562	386	239	84	2	2525M
Silver Lk Brighton	1	16	50	136	212	327	642	514	346	195	51	7	2497
Woodruff.....	5	9	158	296	318	474	649	605	480	303	116	7	3420
Division.....	12	22	165	311	434	534	740	690	511	354	151	18	3942
UINTA BASIN													
Duchesne.....	0	17	248	433	525	637	811	728	543	381	178	42	4543
Ft. Duchesne.....	0	16	213	444	531	658	812	761	572	420	186	23	4636
Jensen.....	0	16	282	456	562	652	799	734	571	432	196	31	4731
Division.....	0	17	262	443	534	667	815	771	563	414	184	27	4697
SOUTHEAST													
Blanding.....	M	M	M	M	M	M	M	855	722	445	238	77	M
Ferron.....	1	50	292	461	547	699	903	784	637	408	239	78	5099
Hanksville.....	23	139	430	570	654	705	873	799	636	499	326	120	5774
Moab 4 NW.....	18	158	476	597	703	751	884	859	687	544	349	164	6190
Price Warehouse..	0	30	206	399	526	677	894	762	642	356	156	34	4682
Division.....	4	99	354	504	624	723	889	824	679	458	272	95	5525
STATE AVERAGE.....	5	69	296	445	533	659	842	776	616	423	223	69	4956

Source: Utah State Climatologist Office.
M-Missing

Normal Growing Degree Days Base 40, by Months, Utah.

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
WESTERN													
Delta.....	1	76	217	350	549	709	834	798	623	417	167	19	4760
Milford.....	4	76	208	343	530	661	791	771	600	411	173	33	4601
Modena.....	52	115	238	364	529	628	751	735	590	443	213	84	4742
Snowville.....	0	14	124	285	462	590	698	673	540	365	117	2	3870
Wendover.....	0	50	189	347	660	837	973	931	724	371	107	1	5190
Division.....	18	79	207	340	534	667	792	765	601	403	167	36	4609
DIXIE													
St. George.....	220	290	432	598	770	864	985	961	794	632	376	241	7163
Zion Nat'l Park..	183	240	364	540	764	871	995	977	842	680	341	210	7007
Division.....	200	262	392	549	742	840	963	944	796	631	353	223	6895
NORTH CENTRAL													
Corinne.....	0	29	173	330	540	700	812	778	616	387	131	4	4500
Elberta.....	0	63	212	352	559	703	830	804	636	400	163	15	4737
Farmington USU...	1	70	203	339	584	732	850	821	653	404	161	16	4834
Logan USU.....	0	4	106	261	502	710	841	820	624	335	86	0	4289
Ogden Pioneer....	0	50	177	322	601	773	897	863	687	400	147	11	4928
SLC Airport.....	0	54	189	330	598	758	887	859	684	405	151	10	4925
Tooele.....	0	46	162	296	565	780	914	883	611	361	126	9	4823
Trenton.....	0	2	106	273	465	616	710	680	551	378	118	0	3899
Division.....	1	40	166	313	545	712	832	804	631	384	133	9	4570
SOUTH CENTRAL													
Cedar City FAA...	41	94	204	328	531	698	827	806	641	412	192	69	4843
Fillmore.....	21	93	222	347	566	722	852	828	668	425	182	42	4968
Kanab PH.....	131	187	301	419	615	723	841	826	697	518	287	164	5709
Levan.....	0	60	194	329	522	673	795	769	610	410	170	19	4551
Loa.....	1	45	141	264	428	551	662	635	486	342	138	22	3715
Manti.....	0	39	175	307	485	654	766	742	576	373	141	10	4268
Nephi.....	13	72	195	330	552	710	833	806	647	431	190	47	4826
Panguitch.....	14	58	170	305	458	542	641	619	529	394	172	39	3941
Richfield.....	38	100	232	354	516	619	732	708	566	431	203	68	4567
Division.....	27	74	188	316	502	641	760	736	586	403	177	51	4461
NORTHERN MOUNTAINS													
Heber.....	0	12	126	274	451	567	673	649	529	372	125	4	3782
Manila.....	0	7	99	241	428	633	755	728	523	318	96	1	3829
Morgan.....	0	20	143	295	479	593	692	664	540	380	124	4	3934
Olmstead PH.....	4	51	186	309	536	723	854	832	663	412	150	9	4729
Silver Lk Brighton	0	0		69	221	361	518	477	328	169	11	0	2154
Woodruff.....	0	0	29	190	369	487	615	583	459	286	46	0	3064
Division.....		12	90	230	412	556	675	647	502	322	91	3	3540
UINTA BASIN													
Duchesne.....	0	11	155	325	522	659	764	735	557	355	100	0	4183
Ft. Duchesne.....	0	5	157	337	525	636	736	701	551	369	98	0	4115
Jensen.....	0	10	177	358	545	640	739	694	557	392	117	0	4229
Division.....	0	9	167	343	534	653	755	720	562	370	103	0	4216
SOUTHEAST													
Blanding.....	0	64	191	330	545	706	823	795	637	389	159	21	4660
Ferron.....	0	26	156	301	515	718	830	790	611	377	140	6	4470
Hankaville.....	11	121	294	442	667	770	890	857	679	473	209	45	5458
Moab 4 NW.....	43	153	332	512	736	821	937	906	736	535	257	83	6051
Price Warehouse..	0	47	191	350	579	708	824	792	636	405	161	16	4709
Division.....	15	94	248	399	622	752	871	839	671	452	192	38	5193
STATE AVERAGE.....	17	68	196	337	538	673	793	765	605	405	162	34	4593

Source: Utah State Climatologist Office.

Frost Free Period, Utah, 1989 and Normal (1931-60).

Station	1989			Normal		
	Last Spring Minimum of 32° or Below	First Fall Minimum of 32° or Below	Number of Days Between Dates	Last Spring Minimum of 32° or Below	First Fall Minimum of 32° or Below	Number of Days Between Dates
WESTERN						
Delta.....	5-20	10-4	137	5-11	9-30	142
Milford.....		10-4	M	5-18	9-26	131
Modena.....	5-31	10-1	123	5-21	9-28	130
Snowville.....	5-26	9-13	110	6-5	9-6	93
Wendover.....	4-4	10-29	208	4-21	10-23	186
DIXIE						
St. George.....	3-5	10-30	239	4-1	11-10	223
Zion Nat'l Park..	4-27	10-28	184	4-6	11-7	215
NORTH CENTRAL						
Corinne.....	5-20	10-5	138	5-14	9-28	138
Elberta.....	5-20	10-5	138	5-14	9-30	140
Farmington USU...	3-22	10-5	197	5-4	10-12	161
Logan USU.....	4-11	10-26	198	5-8	10-13	159
Ogden Pioneer PH.	3-22	10-29	200	5-1	10-14	167
SLC Airport.....	3-21	10-17	190	5-3	10-11	161
Tooele.....	4-10	10-26	199	4-28	10-24	179
Trenton.....	6-21	9-4	75	5-31	9-12	104
Utah Lake Lehi...	5-20	10-5	138	5-18	9-28	134
SOUTH CENTRAL						
Cedar City FAA...	5-31	10-4	126	5-17	9-30	136
Fillmore.....	4-29	10-17	161	5-4	10-11	160
Kanab PH.....	4-28	10-26	181	5-6	10-13	160
Levan.....	5-20	10-5	138	5-16	10-3	140
Loa.....	6-22	9-13	83	6-22	8-29	68
Manti.....	5-20	10-5	138	5-24	9-28	128
Nephi.....	5-20	10-5	138	5-11	10-2	145
Panguitch.....	6-22	9-9	79	6-19	9-3	76
Richfield KSVC...	5-26	9-13	110	5-28	9-18	113
NORTHERN MOUNTAINS						
Coalville.....	6-22	9-3	73	6-16	8-29	74
Heber.....	5-27	9-11	107	6-11	9-3	84
Manila.....	6-22	9-13	83	6-8	9-8	92
Morgan.....	6-22	9-13	83	6-5	9-8	96
Olmstead PH.....	4-27	10-17	173	5-23	9-30	130
Scofield.....	5-31	8-25	86	6-29	8-25	57
Silver Lk Brighton	6-26	8-25	60	7-5	8-27	53
Woodruff.....	6-23	8-25	63	6-27	8-23	57
UINTA BASIN						
Duchesne.....	4-28	10-8	163	5-28	9-20	115
Fort Duchesne....	5-20	10-1	134	5-26	9-16	114
Jensen.....	5-2	9-13	134	5-24	9-14	113
SOUTHEAST						
Blanding.....		10-19	M	5-15	10-6	144
Ferron.....	5-13	10-5	145	5-15	10-6	144
Hanksville.....	5-13	10-5	145	4-22	10-20	182
Moab 4 NW.....	4-13	10-8	178	4-21	10-21	183
Price Warehouse..	5-13	10-17	157	5-12	10-5	147

Source: Utah State Department of Agriculture Climatologist, Department of Soil Science and Biomet, Utah State University, Logan, Utah 84322-4825. M-Missing data.

Enterprise Budgets

Prepared by the Economics Department, Utah State University

The following crop and livestock enterprise budgets were prepared by the Economics Department at Utah State University. Although not guaranteed, these budgets are provided to help farmers and ranchers identify potential alternatives to maximize the profitability of their operation. Actual costs and income will vary from farm to farm; therefore, a column has been provided to adapt the budgets to your farm or ranch.

Possible management strategies have been provided by both U.S.U. and the Utah Department of Agriculture.

An Enterprise Budget workbook will be available later this year through the Utah Department of Agriculture. It will include the budget information on pages 124-140, plus additional profitability tips. Contact El Shaffer, phone 538-7104, in Salt Lake City for ordering individual or bulk supplies of the workbook. A nominal printing and postage fee will be charged.

Any questions or suggestions to these budgets should be referred to the appropriate contact person in the Economics Department at Utah State University (phone (801) 750-2310 in Logan).

COW/CALF OPERATION BUDGET
ESTIMATED COSTS AND RETURNS BASED ON A 350 COW
COW/CALF OPERATION LOCATED IN RICH COUNTY UTAH (1989)
82% Weaning Percentage

	Number	Weight	Price	Unit	Total	Amount per Cow	Your Ranch
			($)		($)	($)	
RECEIPTS:							
Calves							
Steers	149	450	102.00	Cwt.	68,391	195.40	_____
Heifers	97	400	95.00	Cwt.	36,860	105.31	_____
Culled Animals							
Bulls	6	1400	55.00	Cwt.	4,620	13.20	_____
Cows	42	1000	45.00	Cwt.	18,900	54.00	_____
Total Receipts					128,771	367.91	_____
CASH COSTS:							
Federal Grazing Fees	1,560		1.84	AUM	2,870	8.20	_____
Private Grazing Fees	520		14.00	AUM	7,280	20.80	_____
Grass Hay	847		60.00	Tons	50,820	145.20	_____
Aftermath	910		14.00	AUM	12,740	36.40	_____
Salt/Minerals	42		2.00	Cwt.	84	0.24	_____
Supplement	52		20.00	Cwt.	1,040	2.97	_____
Replacement Bulls	8		1,400.00	Head	11,200	32.00	_____
Vet/Medicine	364		6.76	Head	2,461	7.03	_____
Trucking					840	2.40	_____
Marketing	350		4.75	Head	1,663	4.75	_____
Fuel/Oil (Hay Feeding)	1,560		0.93	Gal.	1,451	4.15	_____
Repairs (Livestock Equipment)					1,000	2.86	_____
Repairs (Fences & Buildings)					500	1.43	_____
Horse Use (Shoeing, Vet, etc)	4		200.00	Horse	800	2.29	_____
Hired Labor	6		1,200.00	Mon.	7,200	20.57	_____
Pickup	15,000		0.28	Mile	4,200	12.00	_____
Insurance				Head	350	1.00	_____
Property Tax	2,000		1.25	Acre	2,500	7.14	_____
Interest on Operating Loan @12 for 6 months	50,000		0.12	%	3,000	8.57	_____
Total Cash Costs					111,999	320.00	_____
NONCASH COSTS: (Depreciation)							
Fences					1,228	3.51	_____
Livestock Handling Equipment					7,114	20.32	_____
Horse					240	0.69	_____
Buildings					713	2.04	_____
Total Noncash Costs					9,295	26.56	_____
Total Cash and Noncash Costs					121,294	346.55	_____
RETURN TO LAND AND MANAGEMENT					7,477	21.36	_____

Assumptions: 350 brood cows, 82% weaning percentage, bull replacement rate 33%, and 42 cows replaced every year (42 heifer calves saved back for replacement).

Budget prepared by Jodie Harris and DeeVon Bailey cooperating with Rich County producers.

Possible management strategy: Increase weaning percentage from 82% to 87%. This could possibly be accomplished by a more intensive feeding program for replacement heifers as outlined in the stocker feeder budget in this publication. The additional costs of following the stocker feeder program would be about $107/head for each of the replacement heifers.

Additional Costs:		
Feed @ $107/head for 42 head		= $4,495
Pregnancy testing, Pelvic Measurement and Bull Fertility Testing		= $1,000
Total Additional Costs		$5,495
Increased Gross Income:		
9 steers @ $459/head =	$4,131	
9 heifers @ $360/head =	$3,240	
Total	$7,371	

$7,371 - $5,495 = $1,876 Potential increase to Land and Management

Culling after carefull examination through pregnancy testing and pelvic measuring of heifers and fertility testing of bulls for virility and disease, plus improving range by reseeding and management practices can all increase profitability.

COW/CALF/YEARLING OPERATION BUDGET
ESTIMATED COSTS AND RETURNS BASED ON A 200 COW
COW/CALF/YEARLING OPERATION LOCATED IN SOUTHERN UTAH (1989)
80% Weaning Percentage

	Number	Weight	Price	Unit	Total	Amount per Cow	Your Ranch
			($)		($)	($)	
RECEIPTS:							
Calves							
Steers	64	420	103.00	Cwt.	27,686	138.43	_____
Heifers	34	385	96.00	Cwt.	12,566	62.83	_____
Yearlings							
Steers	16	780	90.00	Cwt.	11,232	56.16	_____
Heifers	16	720	85.00	Cwt.	9,792	48.96	_____
Culled Animals							
Bulls	4	1,400	55.00	Cwt.	3,080	15.40	_____
Cows	28	950	45.00	Cwt.	11,970	59.85	_____
Total Receipts					76,326	381.63	_____
CASH COSTS:							
Feed							
Federal Grazing Fees	1,850		1.84	AUM	3,404	17.02	_____
Private Grazing Fees	450		14.00	AUM	6,300	31.50	_____
Hay	265		85.00	Tons	22,525	112.63	_____
Aftermath	50		14.00	AUM	700	3.50	_____
Salt/Minerals	70		2.00	Cwt.	140	.70	_____
Supplements	4		150.00	Tons	600	3.00	_____
Other							
Replacement Bulls	4		1,400.00	Head	5,600	28.00	_____
Vet/Medicine	200		4.50	Head	900	4.50	_____
Trucking					2,000	10.00	_____
Marketing	200		4.75	Head	950	4.75	_____
Fuel/Oil (hay feeding)	4,086		0.93	Gal.	3,800	19.00	_____
Repairs					1,900	9.50	_____
Horse use (Shoeing, vet etc.)	4		200.00	Horse	800	4.00	_____
Hired Labor	600		7.00	Hr.	4,200	21.00	_____
Pickup	15,000		0.28	Mile	4,200	21.00	_____
Insurance					550	2.75	_____
Property Taxes					2,150	10.75	_____
Misc. and Other					1,200	6.00	_____
Interest on operating loan @12 % for 6 Months	50,000		.12	Yr.	3,000	15.00	_____
Total Cash Costs					64,919	324.60	_____
NONCASH COSTS: (depreciation)							
Fences					702	3.51	_____
Livestock Handling Equipment					4,064	20.32	_____
Horse					138	0.69	_____
Buildings					408	2.04	_____
Total Noncash Costs					5,312	26.56	_____
Total Cash and Noncash Costs					70,231	351.16	_____
Return to Land and Management					6,095	30.48	_____

Assumptions: 200 brood cows, 80 % weaning percentage, bull replacement rate of 33 %, and 15 % of cows replaced every year (30 heifer calves saved back for replacement).

Budget prepared by E. Bruce Godfrey in cooperation with producers in southwestern Utah.

Some operations may be able to utilize cheaper feeds (e. g., straw, grass hay, or lower quality alfalfa hay) during the winter months. Recent research at Utah State University has shown that winter feeding costs could be reduced by as much as one fourth with these cheaper feeds. If these cheaper feeds can be obtained, net returns may be increased by as much as $5,000 provided operators are able to maintain production with these feeds.

BEST AVAILABLE COPY

DAIRY BUDGET
ESTIMATED COSTS AND RETURNS PER COW (1989)
FOR THREE HERD SIZES

	Small (60 Cows) 16,600 Pounds	Medium (100 Cows) 17,200 Pounds	Large (190 Cows) 17,800 Pounds	Your Farm
	($)	($)	($)	
RECEIPTS:				
Milk Sales 1/	1,984	2,140	2,221	
Cull Cow 2/	210	210	210	
Bull Calf 3/	40	40	40	
Heifer Calf 4/	52	56	60	
Total Receipts	2,286	2,446	2,531	
COSTS:				
Variable Costs				
Feed 5/	815	909	927	
Vet & Medicine	23	24	21	
Supplies 5/	127	90	106	
Breeding 5/	14	15	19	
Utilities, Hauling, and Misc 5/	186	163	168	
Hired Labor 5/	125	99	180	
Total Variable Costs	1,290	1,300	1,421	
Fixed Costs				
Cow Investment 6/	115	124	132	
Cow Replacement 7/	320	343	367	
Facilities 8/	125	113	89	
Equipment 8/	250	157	165	
Total Fixed Costs	810	737	753	
Total Costs	2,100	2,037	2,174	
RETURNS PER COW TO CAPITAL ASSETS, MANAGEMENT, AND UNPAID FAMILY LABOR	186	409	357	

1/ @12.48/cwt. for large dairies, $12.44/cwt. for medium dairies, and $11.95/cwt. for small dairies. 2/ Assuming 33% turnover with 3% death loss and 30% sold as 1,400 lb. cull cows at $0.50/lb. 3/ At 0.40 head per cow per year. 4/ At 0.40 head per year. Value increases as herd productivity increases. 5/ Average production costs taken from actual farm records in Cache County. 6/ At 12% interest. 7/ At 1/3 of value. 8/ Facilities and equipment fixed costs were established as the "book value" depreciation during 1989 for the medium and large farms. Fixed Costs for the small dairy were calculated as a percent of the large dairy's fixed costs.

Budget prepared by DeeVon Bailey and Clark Israelsen.

Possible management strategy: Reduce calving interval from 14 months to 13 1/2 months through better heat detection.

Additional Costs: Labor $700
Materials $300
Total Additional Costs: $1,000

Additional income: 560 lbs/cow x $12/cwt for milk = $67/cow or $6700

Net Additional income:
Potential additional return to land and management = $5,700 or $57/cow for a 100 cow milking herd.

STOCKER FEEDER OPERATING BUDGET
ESTIMATED COSTS AND RETURNS
BASED ON A 100 HEAD OPERATION

Item	Number	Weight	Price	Unit	Total Value	Amount Per Steer	Your Operation
			($)		($)	($)	
RECEIPTS:							
Steers	100	683	90	Cwt.	61,470	614.70	
Total Receipts						614.70	
CASH EXPENSES:							
Calf Purchase	100	420	103	Cwt.	43,260	432.60	
Feed 1/							
Corn Silage	187		25	Ton	4,675	46.75	
Alfalfa Hay	22.5		85	Ton	1,913	19.13	
Barley	30		108	Ton	3,240	32.40	
Feeding Costs 2/			0.14	Day	2,100	21.00	
Interest @12% 3/					2,376	23.76	
Vet and Medicine					500	5.00	
Death Loss @1.5% 4/					785	7.85	
Marketing					1,120	11.20	
Yardage @$0.07/day					1,050	10.50	
Trucking					500	5.00	
Miscellaneous					500	5.00	
Total Expenses					62,019	620.19	
RETURN TO MANAGEMENT					(549)	(5.49)	

1/ Gain 1.75 pound per day for 150 days = 263 pounds.
2/ Feeding Costs include feed preparation and delivery to the manger.
3/ Interest on the steer and 1/2 cost of feed for 150 days.
4/ Average value of the steer (($614.70 + $432.60) / 2) times 1.5%

Contact Person: Dr. Norris J. Stenquist

Possible management strategy: Reduce death losses to 0.5% by proper vaccination and spending additional time each day checking and "doctoring" animals.

Additional Costs:	Labor	$187
	Materials	$150
Total Additional Costs		$337

Additional income: 1 steer = $614.70

Potential addition to Return to Management = $277.70 or $2.78/head.

Another option is to plant turnips following small grain harvest to provide low cost high energy fall feed. See turnip management strategy on winter wheat budget for potential returns.

FINISH CATTLE OPERATION BUDGET
ESTIMATED COSTS AND RETURNS BASED ON A 1500 PLUS FEEDYARD OPERATION LOCATED IN BOX ELDER COUNTY, UTAH (1989) 248 DAYS ON FEED FROM OCTOBER 15, TO JUNE 20.

	Weight	Price	Unit	Total Per Head	40,000 Lb. Contract
		($)		($)	($)
RECEIPTS:					
Steers	1100	75.00	Cwt.	825.00	30,000
Total Receipts				825.00	
CASH COSTS:					
Feeder Purchase (Steers)	450	102.00	Cwt.	459.00	16,691
General Costs	Days	Price	Unit		
Vet and Medicine			Head	4.75	173
Death Loss (1 percent)				6.42	233
Brand Inspection, etc.			Head	1.35	49
Trucking			Head	2.75	100
Yardage 1/	248	0.07	Day	17.36	631
Feeding Cost 2/	248	0.14	Day	34.72	1,263
Interest @ 12%	248	0.20	Day	49.97	1,817
Total General Costs				117.32	4,266
Feed Costs	Lbs.	Price	Unit		
Alfalfa/Grass Mix	382.00	74.63	Ton	14.25	518
Straw	33.86	45.00	Ton	0.76	28
Corn Silage	3079.73	25.00	Ton	38.50	1,400
Barley	1851.51	108.00	Ton	99.98	3,636
Wheat/Corn Mix	1090.49	108.00	Ton	58.89	2,141
Molasses/Fat	332.74	151.00	Ton	25.12	914
Supplement	44.36	116.50	Ton	2.58	94
Salt	9.96	42.00	Ton	0.21	8
Total Feed Costs				240.29	8,739
Total Costs				816.61	29,696
RETURN TO INVESTMENT				8.39	304
Breakeven Selling Price (per CWT)		$ 74.28			
Feed Cost (Per Pound of Gain)		$ 0.37			
Total Cost (Per Pound of Gain)		$ 0.55			

1/ Yardage includes daily health check, feedyard maintenance and manure hauling.
2/ Feeding Costs include feed preparation and delivery to the manger.

Budget prepared by Jody Harris.

SHEEP OPERATION BUDGET
ESTIMATED COSTS AND RETURNS BASED ON A 2500 HEAD EWE OPERATION LOCATED IN SOUTHERN UTAH (1989)
110% Lamb Weaning Percentage

	Number	Weight	Price	Unit	Total	Amount per Ewe	Your Ranch
			($)		($)	($)	
RECEIPTS:							
Sheep and Lambs							
Lambs	2,250	90	70.00	Cwt.	141,750	56.70	_____
Cull Ewes	200		25.00	Head	5,000	2.00	_____
Cull Rams	10		20.00	Head	200	.08	_____
Wool							
Sold	3,076	10	1.40	Lb.	43,064	17.23	_____
Incentive Payment	3,076	10	0.42	Lb.	12,919	5.17	_____
Unshorn Lamb Payment	2,250	5	0.34	Lb.	3,825	1.53	_____
Total Receipts					206,758	82.70	_____
CASH COSTS:							
Feed							
Federal & State Grazing Fees	6,414		1.86	AUM	11,930	4.77	_____
Private Grazing Fees	3,500		8.00	AUM	28,000	11.20	_____
Hay	50		85.00	Ton	4,250	1.70	_____
Aftermath	2,576		8.00	AUM	20,608	8.24	_____
Salt/Minerals	70		2.00	Cwt.	140	0.06	_____
Other							
Replacement Rams	40		350.00	Head	14,000	5.60	_____
Vet/Medicine	2,500		0.40	Head	1,000	.40	_____
Trucking					7,000	2.80	_____
Shearing	3,076		2.00	Head	6,152	2.46	_____
Fuel/Oil (Hay Feeding)	8,063		0.93	Gal.	8,001	3.20	_____
Repairs					7,500	3.00	_____
Horse use (Shoeing, Vet, Etc.)	4		200	Horse	800	0.32	_____
Hired Labor	1.5		10,500	Man	15,750	6.30	_____
Pickup	15,000		0.28	Mile	4,200	1.68	_____
Predator Control					3,000	1.20	_____
Insurance					1,200	.48	_____
Property Tax					4,800	1.92	_____
Supplies					15,000	6.00	_____
Misc. and Other					1,500	0.60	_____
Interest on Operating Loan @ 12 % for 6 Months	75,000		0.12	Yr.	4,500	1.80	_____
Total Cash Costs					159,331	63.73	_____
NONCASH COSTS:							
Depreciation					15,000	6.00	_____
Total Non Cash					15,000	6.00	_____
Total Cash and Noncash Costs					174,331	69.73	_____
Return to Land and Management					32,427	12.97	_____

ASSUMPTIONS

Number of ewes bred in herd	200	Percent slaughter lambs	1
Percent of ewes replaced	20	Percent Lambs Weaned	110
Percent of rams replaced	33	Number of Ewe Lambs	500
Number of ewes per ram	33	Months on BLM	5.5
Percent ewe death loss	12	Months on Forest Service	4.5
Percent ram death loss	20	Months on Leased Land	1.5

Budget prepared by E. Bruce Godfrey and Gary Anderson (Sanpete County agent) in cooperation with a group of producers in Central Utah.

This budget represents an average of producers who participated in the panel. They included shed and range lambing operations as well as meat and wool breeds. As a result, the costs and returns for particular operators will commonly differ from the averages shown.

Operators who can increase their weaned lambing percentage by 10 percent could increase net returns by about $17,000 if costs did not also increase. There are few variables that can have a larger impact on the net returns obtained by producers.

ALFALFA HAY BUDGET
ESTIMATED COSTS AND RETURNS FOR ALFALFA HAY PRODUCTION (1989)
MILLARD COUNTY, PIVOT SPRINKLER IRRIGATION SYSTEM
PER ACRE BASIS

Item	Unit	Quantity	Price	Total	Your Farm
			($)	($)	
RECEIPTS:					
Alfalfa Sales	Tons	5	85.00	425.00	
Residue	AUM	0.25	14.00	3.50	
Total Receipts				428.50	
PURCHASES:					
Fertilizer					
Phosphate	Unit	80	0.23	18.40	
Pesticides					
Metribuzin	Pt.	1	14.50	14.50	
Carbofuran	Pt.	1	6.83	6.83	
Water	Share	1	13.00	13.00	
Soil Test 1/				0.07	
Total Purchases				52.80	

OPERATIONS:	Times	Machine Costs Fixed ($)	Machine Costs Variable ($)	Labor ($)	Total	Your Farm
Fertilizer Appl.	1	-------	Custom --------		3.00	
Herbicide Appl.	1	2.92	0.40	0.25	3.57	
Insecticide Appl.	1	2.92	0.40	0.25	3.57	
Swathing	3	19.04	3.16	0.88	31.16	
Bailing	3	25.16	3.12	1.12	37.88	
Hauling(S/P wagon)	3	27.94	3.99	0.84	42.43	
Irrigation 2/	5	61.25	20.79	0.81	169.25	
Total Operations Costs					290.86	
Establishment Costs= $218.63/Acre						
Amortized for 7 years at 12%					47.90	
Interest on Purchases, Labor, and Variable Costs @ 12% for 6 months					13.06	
Total Purchases, Operating Costs, Establishment Costs and Interest					404.62	
RETURN TO LAND AND MANAGEMENT					23.88	

1/ Purchase made every third year, 1/3 of cost included each year.
2/ Irrigation Costs are calculated assuming a pivot watering 130 acres. An electric motor with a life of 10 years is used and costs are estimated for a 300 foot well that waters a total of 400 acres. The fixed costs for the well and sprinkling equipment were calculated assuming a 30 year amortization schedule.

Budget prepared by Doug Eck, Jody Gale and DeeVon Bailey with input from a number of producers.

Return to Land and Management for Various Prices and Yields
In Millard County Using a Pivot Irrigation System.

Yield (TONS/ACRE)	Price Per Ton $70	$80	$85	$90	$95
3	($190)	($160)	($145)	($130)	($115)
3.5	($155)	($120)	($103)	($85)	($68)
4	($120)	($80)	($60)	($40)	($20)
4.5	($85)	($40)	($18)	$5	$27
5	($50)	0	$25	$50	$75
6	$20	$80	$110	$140	$170

WINTER WHEAT BUDGET
ESTIMATED COSTS AND RETURNS FOR WINTER WHEAT PRODUCTION (1989)
BOX ELDER COUNTY, FLOOD IRRIGATION SYSTEM
PER ACRE BASIS

Item	Unit	Quantity	Price	Total	Your Farm
			($)	($)	
RECEIPTS:					
Yield Per Acre	Bu.	85	3.70	314.50	_____
Total Receipts				314.50	_____
PURCHASES:					
Seed	lbs.	100	0.13	13.00	_____
Fertilizer					
Nitrogen	Unit	100	0.24	24.00	_____
Pesticides					
2-4-D	Gal.	0.38	10.30	3.91	_____
Imazamethabenz	Pints	1.5	13.50	20.25	_____
Water	Share	0.5	13.00	6.50	_____
Soil Test				0.07	_____
Total Purchases				67.73	_____

		Machine Costs				
OPERATIONS:	Times	Fixed ($)	Variable ($)	Labor ($)		
Fertilizer Appl.	1	-------	Custom -------		3.00	_____
Herbicide Appl.	2	2.92	0.40	0.25	4.22	_____
Plowing	1	12.73	5.35	2.88	20.96	_____
Disking	1	6.28	1.28	0.77	8.33	_____
Cultipacking or						
Floating	1	6.90	2.77	1.00	10.67	_____
Harrowing	1	2.46	1.02	0.77	4.25	_____
Planting	1	8.48	2.57	1.23	12.28	_____
Combining	1	-------	Custom -------		23.00	_____
Hauling	1	Custom @ $0.18/cwt.			6.91	_____
Irrigation	4	1.32	0.27	1.65	9.00	_____
Storage (6 mo.)		@$0.03/bu/month			15.30	_____
Total Operation Costs					117.92	_____
Interest on Purchases, Labor, and Variable Costs		@ 12% for 6 months			8.67	_____
Total Purchases, Operation Costs and Interest					194.32	_____
RETURN TO LAND AND MANAGEMENT					120.18	_____

Budget prepared by Doug Eck, DeeVon Bailey, and Tom Reeve

Possible management strategy: Double crop turnips following small grains. Place 550 lb. steers with a stocking rate of 6 steers/acre and an average gain of 1.75/lbs/day for 60 days. This strategy is based on information from Washington State University, modified for Box Elder County conditions.

Potential additional Costs per acre:

- Harrowing = $4.25 (After straw removal)
- Fertilizer Application = $3
- (Seed included in fertilizer)
- Seed @$1/lb = $4
- Fertilizer 70 units of nitrogen = $16.80
- Two irrigations = $3.84 (variable costs only
- Purchase six 550 lb feeder steers @ $528/head = $3,168/acre
- Fencing = $9
- Implant @ $1.50/steer = $9
- Labor for cattle = $63
- Vet, Medicine, marketing, trucking, death loss interest, and misc. expenses = $144

Total Additional Costs per acre = $3,424.89

Potential additional income: Assuming a stocking rate of 6 head/acre and a gain of 1.5/lb/day for 60 days.

Six 640 lb. steers @ $91/cwt = $3,494.40

Potential additional return to land and management = $69.51/acre

SPRING BARLEY BUDGET
ESTIMATED COSTS AND RETURNS FOR BARLEY PRODUCTION (1989)
CACHE COUNTY, WHEEL LINE GRAVITY FLOW SPRINKLER IRRIGATION
PER ACRE BASIS

Item	Unit	Quantity	Price	Total	Your Farm
			($)	($)	
RECEIPTS:					
Yield Per Acre	Cwt. (80 Bu.)	38.4	5.00	192.00	
Total Receipts				192.00	
PURCHASES:					
Seed	lbs.	100	0.13	13.00	
Fertilizer					
Nitrogen	Unit	80	0.24	19.20	
Pesticides					
2-4-D	Gal.	0.38	10.30	3.91	
Water	Share	0.5	13.00	6.50	
Total Purchases				42.61	

OPERATIONS:	Times	Machine Costs Fixed ($)	Variable ($)	Labor ($)		
Fertilizer Appl.	1	------ Custom ------			3.00	
Herbicide Appl.	2	2.92	0.40	0.25	4.22	
Plowing	1	12.73	5.35	2.88	20.96	
Disking	1	6.28	1.28	0.77	8.33	
Harrowing	1	2.46	1.02	0.77	4.25	
Planting	1	8.48	2.57	1.23	12.28	
Combining	1	------ Custom ------			23.00	
Hauling	1	Custom @ $0.18/cwt.			6.91	
Irrigation	2	37.17	0.46	0.95	39.99	
Storage (6 mo.)		@$0.03/bu./month			14.40	
Total Operations Costs					137.34	
Interest on Purchases, Labor, and Variable Costs		@ 12% for 6 months			6.59	
Total Purchases, Operation Costs and Interest					186.54	
RETURN TO LAND AND MANAGEMENT					5.46	

Budget Prepared by Doug Eck and DeeVon Bailey.

Possible management strategy: Soil test every third year. One expert believes that soil testing will increase yields over time by an average of 10%. This would increase total receipts by an average of $19.20 per acre. Additional costs would include a soil test that is conducted every third year (about $0.07/acre/year) and any additional fertilizer that would be purchased and applied.

See winter wheat budget for possibilities of raising turnips after the barley crop is harvested.

CORN GRAIN BUDGET
ESTIMATED COSTS AND RETURNS FOR CORN GRAIN PRODUCTION (1989)
BOX ELDER COUNTY, FLOOD IRRIGATION SYSTEM
PER ACRE BASIS

Item	Unit	Quantity	Price	Total	Your Farm
			($)	($)	
RECEIPTS:					
Corn Silage Sales	Bu.	160	2.65	424.00	
Total Receipts:		(89.6 CWT)	(4.75/CWT.)	424.00	
PURCHASES:					
Seed	lbs.	16	1.50	24.00	
Fertilizer					
Nitrogen	Unit	150	0.24	36.00	
Phosphate	Unit	75	0.23	17.25	
Pesticides					
Alachlor 1/	Qt.	1.34	5.85	7.85	
Atrazine 2/	Gal.	0.33	11.98	3.95	
Phorate 3/	Lb.	6.75	1.55	10.46	
Parathion	Aerial Application			5.50	
Water	Share	0.5	13.00	6.50	
Soil Test 2/				0.07	
Total Purchases:				111.58	

OPERATIONS:	Times	Machine Costs Fixed ($)	Variable ($)	Labor ($)		
Fertilizer Appl.	1	---- Custom ----			3.00	
Herbicide Appl.	1	3.60	0.92	0.50	5.02	
Plowing	1	12.73	5.35	2.88	20.96	
Disking	1	6.28	1.28	0.77	8.33	
Triple-K	1	4.61	1.34	0.45	6.40	
Land Plane	1	8.24	2.86	0.98	12.08	
Planting	1	---- Custom ----			10.00	
Cultivating	2	12.96	2.96	1.11	21.10	
Irrigation	6	1.32	0.27	1.65	12.84	
Harvesting						
Combining	1	---- Custom ----			23.00	
Hauling	1	---- Custom ----			5.00	
Drying	1	---- Custom ----			24.00	
Offset Disking	1	11.11	3.35	0.91	15.37	
Total Operation Costs:					167.10	
Interest on Purchases, Labor and Variable Costs	@ 12% for 6 months				11.07	
Total Purchases, Operation Costs and Interest					289.75	
RETURN TO LAND AND MANAGEMENT					134.25	

1/ Applied two out of every three years so only 2/3 of cost included. 2/ Purchases made every third year, 1/3 of cost is included each year. 3/ Pesticide applied while drilling.

Budget prepared by Doug Eck, DeeVon Bailey, Tom Reeve, and Lyle Holmgren.

Possible management strategy: Harvest as silage instead of grain.
Increased income: Corn silage = $562.50 (22.5 tons @ $25/ton.
Note, the corn silage yield is based on 25 tons of green corn silage (30-32 % dry matter) harvested with 10% spoilage.

Decreased costs:		
	Combining	$23.00
	Hauling	$5.00
	Drying	$24.00
	Offset disking	$15.37

Total Increased Income and reduced costs = $629.87 /acre

Decreased Income: Corn grain 160 bu. @ $2.65/bu. = $424.00/acre
Increased costs: harvesting corn silage = $111.15/acre
Total decreased income and increased costs = $535.15/acre

Additional return to management for this strategy (total increased income and reduced costs minus total reduced income and reduced costs) = $94.72/acre.

ONION BUDGET
ESTIMATED COSTS AND RETURNS FOR ONION PRODUCTION IN BOX ELDER COUNTY ON A 30 ACRE FIELD WITH FURROW IRRIGATION

ITEM	UNIT	QUANTITY	PRICE	TOTAL	YOUR FARM
			($)	($)	
RECEIPTS:					
Jumbo	50 # Bags	480	4.50	2,160.00	
Medium	50 # Bags	320	3.25	1,040.00	
Total Receipts				3,200.00	
PURCHASES:					
Pesticides					
Glyphosate	Pt.	0.5	7.50	3.75	
DCPA	Lbs.	10	4.75	47.50	
Oxyfluorfen	Pt.	1	7.28	7.28	
Bromoxynil	Pt.	2	5.35	10.70	
Fertilizers					
Nitrogen	Units	260	0.24	62.40	
Phosphate	Units	100	0.23	23.00	
Seed	Lbs.	1.25	60.00	75.00	
Water	Share	1	7.00	7.00	
Total Purchases				236.63	

OPERATIONS:	Times	Fixed ($)	Variable ($)	Labor ($)		
Plowing	1	13.67	7.65	2.20	23.52	
Bearcatting	1	35.02	2.47	0.79	38.28	
Floating	1	6.90	2.77	1.00	10.67	
Furrowing	2	9.13	2.40	1.83	17.59	
Cultivating	5	25.21	4.41	3.38	64.16	
Harrowing	1	1.37	0.84	0.79	3.00	
Planting	1	32.52	1.80	1.38	35.70	
Herbicide Ap	5	7.24	0.66	0.55	13.29	
Hand Hoeing					150.00	
Irrigation	14				42.00	
Fall Fertilizer	1	--------	Custom	---------	3.00	
Spring Fert.	1	2.30	0.96	0.92	4.18	
Pesticide Ap	5	---- Custom by Airplane ----			87.00	
Rotary Rod	1	12.09	1.63	1.38	15.10	
Topping	1	142.50	33.50	13.75	189.75	
Curl Loader	1	48.87	7.58	9.35	65.80	
Trucking	1	84.00	30.93	16.50	131.43	
Marketing Costs @ $1.70 Per 50 # Bag					1,360.00	
Total Operations					2,254.47	
Interest On Purchases, Labor, and Variable Costs @ 12% for 6 Months					124.22	
Total Purchases, Operation Costs and Interest					2,615.32	
RETURN TO LAND AND MANAGEMENT					584.68	

Budget Prepared by DeeVon Bailey, Tom Reeve, and a producer panel.
Possible management strategy: Some consultants believe that it is unnecessary to place more than 225 units of nitrogen on onions. If the units of nitrogen were reduced to 225 units the return to land and management would be increased by $8.40/acre (35 units x $0.24).

HYCREST WHEATGRASS SEED BUDGET
ESTIMATED COSTS AND RETURNS 1989

Item	Unit	Quantity	Price	Total	Your Farm
			($)	($)	
RECEIPTS:					
Cleaned Seed	Lbs.	430	0.93	399.90	
Total Receipts				399.90	
PURCHASES:					
Fertilizer					
Nitrogen	Unit	60	0.24	14.40	
Pesticides					
Herbicide	Pt.	2	1.60	3.20	
Insecticide	Pt.	1	2.40	2.40	
Water	Share	0.8	13.00	10.40	
Total Purchases				30.40	

OPERATIONS:	Times	Costs Fixed ($)	Variable ($)	Labor ($)		
Fertilizer Appl.	2	-------	Custom -------		6.00	
Herb./Insect. Appl.	3	0.76	0.32	0.26	2.50	
Irrigation	4	8.90	0.45	0.90	14.30	
Cultivation	2	37.17	0.46	0.95	39.99	
Rouging					7.00	
Windrowing	1	13.59	2.07	0.55	16.21	
Combining	1	-------	Custom -------		25.00	
Hauling		Custom @ $0.15/Cwt.			0.75	
Cleaning		Custom @ $0.15/Lb.			75.00	
Certification	1	1.88	2.65		4.53	
Total Operation Costs					191.28	
Interest on Purchases, Labor, and Variable Costs @ 12% for 6 months					9.56	
Establishment Costs @ $130.33/Acre amortized for nine years					24.45	
Total Purchases, Operation Costs, interest and establishment costs					255.69	
RETURN TO LAND AND MANAGEMENT					144.21	

Budget prepared by Terry Glover with modifications by DeeVon Bailey.

The following table displays breakeven prices for different yields and different lengths of stands. The cost of establishing grass seed decreases the more years the stand is harvested. However, the average yield per acre does not remain constant since yields may increase in the first years after planting and eventually decrease in later years. The following table displays the impact on break-even prices of this interaction between yields and the number of years the stand is harvested. Choose the number of years the seed will be harvested and then estimate the average yield over that many years to determine the average price you will need to receive over time to cover costs.

Break-even prices per cleaned pound of seed based on yields and the number of years the grass seed stand will be harvested.

Years Harvested	Pounds of clean seed per Acre					
	300	350	400	450	500	550
	Dollars					
2	1.03	0.88	0.77	0.69	0.62	0.56
4	0.91	0.78	0.69	0.61	0.55	0.50
6	0.88	0.75	0.66	0.58	0.53	0.48
8	0.86	0.74	0.64	0.57	0.51	0.47
10	0.85	0.73	0.64	0.57	0.51	0.46

APPLE ORCHARD BUDGET
ESTIMATED COSTS AND RETURNS PER ACRE
APPLE OPERATION LOCATED IN UTAH COUNTY 1989

	Unit	Quantity	Price	Total per acre	Your Farm
			($)	($)	
RECEIPTS:					
Fancy and Extra Fancy	Box	850	6.00	5,100.00	
Small and Poor Colored	Box	250	4.00	1,000.00	
Culls	Lbs.	3,000	0.15	450.00	
Total Receipts				6,550.00	
PURCHASES:					
Fertilizer					
46% Urea	Lbs.	8	0.15	1.20	
Calcium Chloride	Lbs.	4	0.45	1.80	
Ammonium Nitrate (17-24-25)	Ton	0.25	180.00	45.00	
Zinc	Lbs.	20	0.72	14.40	
Insecticide					
Azinphos-Methyl	Lbs.	16	3.50	56.00	
Dormant Oil	Gallon	5	2.25	11.25	
Parathion	Pint	1	3.84	3.84	
Propargite	Lbs.	1.75	3.75	6.56	
Thinning Sprays					
Elgetol	Pints	1.5	4.40	6.60	
Carbaryl	Lbs.	2	2.32	4.64	
Herbicides					
Glyphosate	Gallon	0.6	57.53	34.52	
Growth Regulator					
Promoline	Gallon	0.25	43.00	10.75	
Harvesting	Bin	50	10.00	500.00	
Processing	Box	1000	3.00	3,000.00	
Pruning	Acre			200.00	
Rodent Control	Acre			15.00	
Water	Month	4.5	115.00	517.50	
Bee Rental	Acre			20.00	
Labor 1/	Acre			240.00	
Total Purchases				4,689.06	
	Times	Fixed ($)	Variable ($)		
OPERATIONS:					
Dry Fertilizer Appl.	1	2.24	6.04	8.28	
Spraying	10	26.40	76.19	102.59	
Herbicide Appl.	1	3.31	11.55	14.86	
Frost Control	50 Hours	36.20	73.00	109.20	
Mowing	2	4.85	16.25	21.11	
General Farm		115.89	45.00	160.89	
Total Operation Costs				416.93	
Interest on Purchases and Variable Costs @ 12% for 6 months				295.03	
Establishment Cost $6,729.24/acre over 20 years @ 12 % interest				900.90	
Total Purchases, Operation Costs, Interest and Establishment costs				6,301.92	
RETURN TO LAND AND MANAGEMENT				248.08	

1/ Labor costs are estimated on a per acre basis rather than by operation as suggested by the producer panel.

Budget prepared by Jodie Harris with input from a producer panel.

Processing is almost one-half of total cost for raising apples. Packing and processing apples by yourself or cooperatively with your neighbor(s) may help reduce your costs and increase your profits.

HIGH RESIDUE CONSERVATION TILLAGE INCREASES SOIL MOISTURE AND PROFITS

By V. P. Rasmussen and R. L. Newhall, Soil Sci. & Biomet, Utah State University

Erosion Control:
The 1985 Food Security Act (the current farm bill) requires high-residue (high surface-straw cover) tillage techniques for many USDA Conservation Plans that are mandated by law on HEL (highly erodible land). Landowners and operators must alter many of their traditional tillage practices to remain eligible for USDA programs, insurance, and disaster assistance. These techniques are so new and innovative that it was deemed advisable to include research on them in this publication.

The Soil Science & Biometeorology Department at Utah State University has been conducting tillage research and demonstration plots on several watersheds throughout the State of Utah since 1982. Generous support from the Utah State Department of Agriculture, the Utah Energy Office, the Utah Association of Conservation Districts, the USDA-Soil Conservation Service, and other groups have helped to make this an ongoing, cooperative effort. Without the support of these auxiliary groups, research and educational efforts with conservation tillage and low-input agriculture would be minimal, at best, in Utah. However, cooperative efforts, such as this, add new dimensions to agricultural production in the State. Several new, beneficial cropping systems have been developed from this research, including optimal fertilizer placement techniques, no-till drill development and comparisons, and moisture-saving chemical fallow techniques.

Two 1988 studies at different sites with different soils (one highly-eroded HEL soil and one moderately-eroded HEL soil) in the Clarkston Watershed have been summarized. The studies focused upon different ways of meeting the tillage requirements of the "Conservation Compliance" provisions of the 1985 Food Security Act. It is often difficult for growers to drastically change their established tillage patterns in order to meet the stringent requirements of farming HEL soils according to the FSA of 1985 regulations. We set out several fallow-year tillage patterns in which we computed and measured erosion and compared estimated tillage costs for each practice.

Conclusion: The chemical-fallow (no-till) treatments are better both in conserving soil and increasing profits. However, the cost of applying chemicals was low in 1988, due to the drought that limited weed growth and necessitated only one chemical treatment. The USU-recommended practice of combining tillage and chemical treatments and the chisel-only system were both within reasonable limits of cost--but they both accelerated erosion. On steep, highly erodible soils, such as these, the chemical fallow treatment is probably the method of choice. However, on slopes that are less than these, chisel plow methods can be used and still meet the FSA-85 requirements. Traditional disk and inversion plow methods are much more costly to the grower and can seldom meet the FSA-85 requirements. In addition, the measured dryland moisture savings under chemical fallow (1-2 inches per year) offer an additional incentive for growers to change their traditional methods.

Table 1 gives the tillage costs and calculated erosion values for each of the two sites. The calculations were identical to those used by the USDA-SCS to calculate conservation compliance for FSA-85 certification.

Table #1. Tillage Comparison vs. Soil Loss, Dryland Winter Wheat.

	Treatments 1/				
	1	2	3	4	5
	- - - - - - - - - - $/Acre - - - - - - - - - -				
FALLOW OPERATIONS:	10.95	-	-	-	-
Moldboard	10.95	-	-	-	-
Disk	32.85	23.40	-	-	-
Chisel	-	-	16.80	4.20	-
Harrow	5.70	5.70	5.70	-	-
Spraying	-	-	-	18.25	18.25
Fertilizing	30.52	30.52	30.52	30.52	30.52
Seeding	4.95	4.95	4.95	4.95	4.95
Total to Establish Crop	84.97	64.57	57.97	57.92	53.72
	- - - - - - - - - - Ton/Acre - - - - - - - - - -				
SOIL LOSS:					
Moderately Eroded Soil 1/					
Universal Soil Loss Equation	5.71	3.98	3.29	2.94	1.21
Wind Erosion Equation	11.90	11.90	11.90	4.20	-
Estimated Soil Loss	17.61	15.88	15.19	7.14	1.21
Highly Eroded Soil 2/					
Universal Soil Loss Equation	22.72	15.84	13.08	8.95	4.82
Wind Erosion Equation	7.10	6.50	5.30	2.00	-
Estimated Soil Loss	29.82	22.34	18.38	10.95	4.82

1/ Treatment Codes:
1 Conventional Tillage System - Moldboard Plow/Disk
2 Conventional Tillage System - Disk
3 Conventional Tillage System - Chisel/Sweep
4 Conservation Tillage System - Chisel/Chemical Fallow
5 Conservation Tillage System - Chemical Fallow

2/ Site #1 (Ravsten Farm) -- Moderately eroded soil. (Soil: Mendon-Collinston Complex, 6 to 30% slopes, Class #VIe-U).
3/ Site #2 (Thompson Farm) -- Highly-eroded soil. (Soil: Wheelon-Collinston Complex, 10 to 30% slopes, Class #VIe-U1).

Moisture Conservation:
Moisture conservation studies have also been conducted at the Bluecreek and Nephi Experimental Farms, and at several "on-farm" Extension demonstrations across the State. These studies have shown that soil moisture (as much as 1 to 2 inches per year) can be saved with high-residue (surface mulch) conservation tillage systems.

Table #2 gives the most recent yield data from the experimental farm plots and one other (Bluecreek Field #2) located on a commercial farm near the Bluecreek Experimental Station. Note that the yields from the chemical fallow treatments generally exceed other yields. This is simply due to the moisture-saving nature of our newer chemical fallow methods.

Table #2. Yields for Dryland Winter Wheat Tillage Studies at Bluecreek and Nephi, Utah Experimental Sites.

Treatments	1987	1986	1985
		-Bu./Acre-	
NEPHI EXPERIMENTAL FARM			
Cont. Spring No-Till (T).....	13.5	24.4	3.0
Cont. Fall No-Till (T).....	12.6	27.2	3.5
Chemical Fallow Fall No-Till (T)...	--	33.3	--
Fall Ripped Chem-Fallow No-Till (T)	--	32.9	--
Conventional Fallow (DD).....		31.3	
Precipitation (inches).....	9.3	18.9	13.5
BLUECREEK EXPERIMENTAL FARM			
Cont. Spring No-Till (Y).....	15.8	24.1	14.0
Cont. Spring No-Till (DF).....	10.3	18.9	13.5
Cont. Fall No-Till (DF).....	7.8	42.7	21.0
Chemical Fallow Fall No-Till (T)...	--	60.9	--
Fall Ripped Chem-Fallow No-Till (Y)	--	50.5	--
Conventional Fallow (DF).....	--	41.7	--
Precipitation (inches).....	13.4	19.6	13.8
BLUECREEK FIELD #2			
Cont. Spring No-Till (Y).....	21.0	33.5	--
Cont. Spring No-Till (DF).....	16.3	23.9	--
Cont. Fall No-Till (Y).....	15.8	59.0	--
Cont. Fall No-Till (DF).....	12.3	41.2	--
Chemical Fallow Fall No-Till	47.0	--	--
Chemical Fallow Fall No-Till (DF)..	45.6	--	--
Conventional Fallow Dammer Diker (Y)	41.5	--	--
Conventional Fallow Dammer Diker (DF)	45.3	--	--
Fall Ripped Chem-Fallow No-Till (Y)	41.8	--	--
Fall Ripped Chem-Fallow No-Till (DF)	44.0	--	--
Conventional Fallow (DF).....	44.5	--	--
Precipitation (inches).....	13.4	19.6	13.4

(T) Tye No-till Drill
(Y) Yielder No-Till Drill
(DD) Double Disk Conventional Drill
(DF) Deep Furrow Conventional Drill

CHEMICAL FALLOW

Cost savings and increased sales can result from using chemical fallow practices. The following worksheet was prepared by a major chemical company. It helps you analyze the potential savings on your operation.

Note: Only use pesticides when needed and at the rates prescribed on the label. Just because your neighbor is spraying doesn't mean you should. When you spray, you potentially kill insect friends, as well as enemies. Save the cost if spraying isn't necessary. Applying at the recommended rate can also save money. If you have questions, contact your County Agent.

1. SAVE TILLAGE.
How many tillage trips do you make for weeds between harvest and planting? How much do tillage trips cost you each trip?

Sample Cost/Tillage Trip/Acre

Plow	Chisel	V-Blade	Disk	Field Cult.	Rod Weeder
$9.00	$5.00	$4.50	$5.00	$4.00	$2.50

Cost/Acre

Trip 1 $_____ A chemical fallow application
Trip 2 $_____ between harvest and planting
Trip 3 $_____ can replace an average of two
Trip 4 $_____ to three tillage trips.
Trip 5 $_____ How many can you save?_____
Trip 6 $_____

How many dollars/acre can you save by reducing tillage trips with chemical fallow?

(answer 1) $_____ /ac.

2. SAVE MOISTURE.
University data* show that 1/3 to 1/2" of soil moisture can be lost with each tillage trip.
*1977 Farm Journal

Number of Tillage Trips Eliminated	Potential Moisture Savings	Potential Yield Increase: Fall Wheat	Potential Yield Increase: Spring Wheat
		- - -Bushels per Acre- - -	
1	.5"	2.0	3.5
2	1.0"	4.0	7.0
3	1.5"	6.0	10.0

Est. your potential yield increase. _____bu/ac.
Times your current price/bu. ..... $_____/bu.

Equals potential increase/acre
(answer 2) $_____ /ac.

3. SAVE TIME.
Saving time allows you to plant earlier and earlier. Planting may led to higher yields!

Sample PNW University Test Plots

Planting Date	Spring Barley	Spring Wheat	Fall Wheat
	Tons/Acre	- -Bushels/Acre- -	
April 1-11	2.08	18.0	
After April 26	1.80	11.5	
By Oct. 1			40.9
After Oct. 10			27.4

What is your value of optimum planting? ..... _____ bu/ac.

Times your current price/Bu. .....$_____ /bu.

Equals potential increase/acre. ..... $
(answer 3) _____ /ac.

4. SAVE SOIL.
Another benefit of less tillage is reduced erosion. The chart below indicates soil loss due to wind and water.

Estimate Soil Loss in Tons/Acre/Year

	Wind	Water
Black Fallow.....	13.1	7.4
Stubble Mulch Fallow	3.5	4.6
Chemical Fallow	Trace	Trace

How much are you willing to pay per acre to reduce soil erosion? ..... (answer 4) $_____ /ac.

5. HERBICIDE (for chemical fallow)
What does your herbicide cost per gallon? $_____
What is your rate/acre? _____oz/ac.
Rate/acre _____oz. times $_____ gal. divided by 128.

Equals herbicide cost/acre. ..... $_____/ac.
What is your application cost/acre? .. $_____/ac.

Total herbicide cost/acre ..... $
(answer 5) _____ /ac.

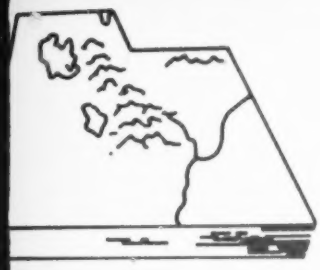
6. CHEMICAL FALLOW PAYOUT.

Tillage Savings ..... (answer 1) $_____/ac.
Moisture Savings ..... (answer 2) $_____/ac.
Time Savings ..... (answer 3) $_____/ac.
Soil Savings ..... (answer 4) $_____/ac.
Total $_____/ac.

Minus herbicide cost/acre ..(answer 5) $_____/ac.

Equals Chemical Fallow Payout/Acre. ..$_____ /ac.

Multiply by the acres you could be using in this system, to equal the total chemical fallow payout.



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U.S. DEPARTMENT OF AGRICULTURE

The following reports published by this office will update any of the estimates in this publication before the 1991 edition:

Report	Release Date
1. **Utah Agriculture** (covers a wide range of farm topics, including crops, livestock, and prices. Also includes annual crop and livestock data).	Twice Monthly
2. **Weekly Crop-Weather** (covers crop conditions during the planting, growing and harvesting season. Also includes livestock comments and detailed weather information by reporting station).	Every Monday, April-October

Information for receiving the above reports can be obtained by writing this office, or you may telephone (801)524-5003.

Delroy J. Gneiting

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